Implementation Manual for the Program of Studies

ELEMENTARY SCHOOL

Kentucky Department of Education
Wilmer S. Cody, Commissioner

Acknowledgements

The following Kentucky educators have given time and energy toward the development of the *Implementation Manual for the Program of Studies for Kentucky Schools, P-12*. Without their contributions, this document could not have been written. Listed are their work assignments at the time of their participation in the development process.

Arts and Humanities Committee

Wendy Altenburger
Horse Cave Theatre
Horse Cave

Andrea Atcher, Teacher
Elizabethtown High School
Elizabethtown Independent

Ginger Bard,
Resource Teacher
Fulton Independent, Fulton County, and Hancock County

Nancy Barker,
Artist in Residence
Nelson County

Rayma Beal, Professor
University of Kentucky

John Benjamin
Kentucky Arts Council
Frankfort

Becky Bingman
Kentucky Collaborative for Teaching and Learning
Louisville

Dwayne Bolin, Professor
Murray State University

Debbie Booher, Teacher
Straub Elementary
Mason County

Sue Bowen, Supervisor
Woodford County

Gerri Combs,
Executive Director
Kentucky Arts Council
Frankfort

Kate Covington, Professor
University of Kentucky

Lou DeLuca
Education, Arts and Humanities Cabinet

Laurie Fields, Teacher
School for the Creating and Performing Arts
Fayette County

Dee Fizdale,
Executive Director
Lexington Arts and Cultural Council
Lexington

Ann French, Supervisor
Logan County

Tina Hall, Supervisor
Jefferson County

Warren Hammack,
Producing Director
Horse Cave Theatre
Horse Cave

Mary Ellen Henzel, Teacher
Graves County High School
Graves County

Amy Brooks Hoffman
Kentucky Opera Association
Louisville

Rebecca Hopper,
Resource Teacher
Rowan County

Dennis Horn,
Deputy Director
Kentucky Collaborative for Teaching and Learning
Louisville

Chuck Lord, Professor
University of Kentucky

Michelle Ludwig
Stage One Theatre
Louisville

Arts and Humanities Committee

Marianne McAdams, Professor
Eastern Kentucky University

Laura McDonald
Capitol Arts Alliance
Frankfort

Larry Moore
Kentucky Educational Television
Lexington

Rhoda Noples, Teacher
Perry County Central High School
Perry County

Jon Oliver, Teacher
Hunter Hills Elementary
Laurel County

Alice Payton, Teacher
Rowan County High School
Rowan County

Mary Ann Payton, Teacher
Central City Elementary
Muhlenberg County

Allen Pensol, Supervisor
Rockcastle County

Jenny Robinson, Teacher
Johnson Central High School
Johnson County

Delaire Rowe, Artist in Residence
Kentucky Arts Council
Bowling Green

Catherine Rubin
Kentucky Collaborative for Teaching and Learning
Louisville

Cheryl Schaefer, Teacher
Iroquois Middle School
Jefferson County

Debbie Shannon, Director of Education
Kentucky Center for the Arts
Louisville

Phil Shepherd, Supervisor
Fayette County Schools

Judy Sizemore, Artist in Residence
Kentucky Arts Council
Frankfort

Deborah Sogin, Teacher
Morton Middle School
Fayette County

Susan Spalding, Professor
Berea College

Robyn Swanson, Professor
Western Kentucky University

David Thurmond, Director of Instructional Support
Oldham County

Lois Joy Ward, Folklife Specialist
Kentucky Folk Life Program
Frankfort

Carolyn Wheatley, Teacher
Bluegrass Middle School
Hardin County

Angie White, Teacher
Northside Elementary
Shelby County

Sharon Wuorenmaa, Teacher
Traditional Male High School
Jefferson County

English/Language Arts Committee

Lauretta Beckham, Teacher
Knight Middle School
Jefferson County

Michelle Bottoms, Library Media Specialist
Boyle County Middle School
Boyle County

Rhonda Boyd, Teacher
Georgetown Middle School
Scott County

Jackie Bretz, Teacher
Bowling Green High School
Bowling Green Independent

Tricia Bronger, Teacher
South Oldham High School
Oldham County

English/Language Arts Committee

Pamela Burton, Teacher
Johnson County Middle
Johnson County

Jan Calvert, Principal
Williams Middle School
Jefferson County

Shirley Chafin, Teacher
Johnson Central
High School
Johnson County

Lynda Clark, Teacher
Paducah Middle School
Paducah Independent

Betty Craft, Teacher
Powell County High School
Powell County

Kelly Crump, Teacher
Rowan County Middle School
Rowan County

Elizabeth Dick,
Resource Teacher
Oldham County

Jason Dodson, Student
Western Kentucky University

Dr. David Durant, Professor
University of Kentucky

Cindy Ellington, Teacher
Brodhead Elementary
Rockcastle County

Julie Ellis, Teacher
Owensboro High School
Owensboro Independent

Judy Faught,
Resource Teacher
Bowling Green High School
Bowling Green Independent

Jon Frederick, Teacher
Cumberland County
High School
Cumberland County

Laura Freese
Staff Development
Coordinator
Center for Gifted Studies
Western Kentucky University

Alyce Grover, Professor
Somerset Community College

Denise Henry, Teacher
Cumberland Trace Elementary
Warren County

Debra Hampton, Teacher
Wurtland Middle School
Greenup County

Dr. Kathy Herzog, Professor
Morehead State University

Jeanette Hodges, Teacher
Highlands High School
Ft. Thomas Independent

Cathie Hoehner, Teacher
Elkhorn Middle School
Franklin County

Dr. Mary Howe, Professor
Murray State University

Jill Hughes, Teacher
Owensboro Middle School
Owensboro Independent

Ken Johnson, Teacher
Montgomery County
High School
Montgomery County

Ruth Johnson, Teacher
Holmes High School
Covington Independent

Julia Jury, Teacher
Shelby East Middle School
Shelby County

Harold Kleinert, Professor
University of Kentucky

Sheree P. Koppel
Secondary Curriculum
Coordinator
Shelby County

Virginia Landreth, Teacher
Rowan County High School
Rowan County

Amy Longwill, Teacher
Danville High School
Danville Independent

English/Language Arts Committee

Jane Martin, Teacher
Shelby County High School
Shelby County

Sue Neal Roberts, Teacher
Allen County Scottsville
High School
Allen County

Linda Teague, Teacher
Hazard High School
Hazard Independent

Carol McKee,
Language Arts Coordinator
Fayette County

Dr. Ann Curry Ruff,
Professor
Western Kentucky University

Lynda Umfress, Teacher
Bourbon County High School
Bourbon County

Patti Messamore, Teacher
Muhlenberg North
High School
Muhlenberg County

Dr. Charles Whitaker,
Professor
Eastern Kentucky University

Debbie Vice, Teacher
Fleming County High School
Fleming County

Sarah Monarch, Teacher
Southside Elementary
Shelby County

Neata Wiley,
Library Media Specialist
Russellville High School
Russellville Independent

Kay Vincent, President
Kentucky Middle School
Association

Ann Perdew, Teacher
Spencer County High School
Spencer County

Modena Sallee, Teacher
Pikeville High School
Pikeville Independent

Michael Wagers, Principal
West Liberty Elementary
Morgan County

Becky Porterfield, Teacher
Fulton County Elementary
Fulton County

Vicki K. Smith, DAC,
Instructional Supervisor
Ohio County Schools

Bonnie Watson
Owensboro Middle School
Owensboro Independent

Dreama Price,
Assistant Professor
Morehead State University

Dr. Lee Ching Tao, Professor
Western Kentucky University

Linda Young
Asbury College

Health and Physical Education Committee

Mike Ballard, Professor
Western Kentucky University

Meda Hall, Teacher
East Jessamine High School
Jessamine County

Virgil Livers, Teacher-
Administrator
Greenwood High School
Warren County

Don Calitri, Professor
Eastern Kentucky University

Maureen "Cookie" Henson,
Teacher
Clay County High School
Clay County

Debbie Melvin, Teacher
Johnson County Middle
Johnson County

Lonnie Davis, Professor
Eastern Kentucky University

Jill Klinker, Teacher
Northern Elementary
Fayette County

Maggie Nicholson, Teacher
Simpsonville Elementary
Shelby County

Health and Physical Education Committee

Gwen Owen, Teacher
Nicholasville Elementary
Jessamine County

Nancy Satterfield, Administrator
Henderson County

Reba Woodall, Teacher
Bryan Station High School
Fayette County

Mark Owens, Teacher - Administrator
Henderson County Jr. High
Henderson County

Harvey Tackett, Itinerant Teacher
Jenkins Independent

Dana Young, Teacher
Taylor Middle School
Taylor County

Diane Polley, Administrator
Jefferson County

Cecil Ward, Teacher
Paducah Tilghman High School
Paducah Independent

Mathematics Committee

Brian Handshoe, Teacher
Martin Elementary
Floyd County

Trish Ney, Teacher
River Ridge Elementary
Kenton County

Ava Taylor, Teacher
Woodford County
Middle School
Woodford County

Regina Hirn, Special Education Teacher
South Oldham High School
Oldham County

Linda Montgomery, Teacher
Berea Community
High School
Berea Independent

Teresa Wallace, Principal
Berea Community
Elementary
Berea Independent

Ray Ginter, Teacher
Johnson Central
High School
Johnson County

Paul W. Prater, Teacher
Betsy Layne High School
Floyd County

Lisa Willian, Teacher
Hart County High School
Hart County

David Jenks, Technology
Millersburg Elementary
Bourbon County

Debbie Riley, Teacher
Paducah Middle School
Paducah Independent

Science Committee

Sharon Ball, Teacher
Corbin Middle School
Corbin Independent

Sylvester Dunn, Teacher
Bell County High School
Bell County

Pam Fazel, Teacher
Butler County Middle School
Butler County

Chuck Blank, Teacher
Bell County Middle School
Bell County

Tara Endris, Teacher
Noe Middle School
Jefferson County

Terry Gordon, Teacher
Winburn Middle School
Fayette County

Nancy Bishop, Teacher
South Laurel High School
Laurel County

Beth Everett, Instructional Supervisor
Christian County

Lawana Hamlin, Teacher
Pine Knott Middle School
McCreary County

Science Committee

Cathy Harris, Teacher
Berea Community
Middle School
Berea Independent

Jamie Hollins, Teacher
Clay County Middle School
Clay County

Ramona Jaynes, Teacher
Corbin Middle School
Corbin Independent

Benna Kaler, Teacher
Hopkinsville High School
Christian County

Sally Kovash,
Science Consultant
University of Kentucky

Jacqulyn Lawless, Teacher
Russell County High School
Russell County

Clara Mackin, Teacher
Bloomfield Middle School
Nelson County

Kathi Matthew, Professor
Western Kentucky University

Joretta Mayes, Teacher
Second Street Elementary
Frankfort Independent

Marilyn McIlwain, Teacher
Montgomery County
High School
Montgomery County

Christine McIntosh,
Media Specialist
Bernheim Middle School
Bullitt County

Frances Peterson, Teacher
Russell Middle School
Russell Independent

Brian Radcliffe, Teacher
Bryan Station High School
Fayette County

Maxine Rudder, Teacher
South Laurel High School
Laurel County

Sharon Shook, Teacher
McCreary Central High School
McCreary County

Mary Silvers, Teacher
Meece Middle School
Somerset Independent

Robert Swanson, Professor
Union College

David Taylor,
Science Coordinator
Fayette County

Kathy Trundle,
Graduate Student
University of Kentucky

Debbie Vinson, Teacher
Estill County High School
Estill County

Jay Webb, Branch Manager
Kentucky Department of
Fish and Wildlife

Tandy Wellman, Teacher
Poage Elementary
Ashland Independent

Greg Wiseman, Teacher
Foley Middle
Madison County

Cindy Witt, Teacher
Rockcastle County
High School
Rockcastle County

Kim Zeidler, Director
Appalachian Rural
Systemic Initiative
Lexington

Social Studies Committee

John Buckner, Principal
Georgetown Middle School
Scott County

Laura Clifford
Content Specialist
Jefferson County Schools

Wes Cornette, Teacher
Williamsburg High School
Williamsburg Independent

Tracey Devney, Teacher
East Jessamine High School
Jessamine County

Sally Dickens, Teacher
Owensboro High School
Owensboro Independent

Vicki Foley, Teacher
Campbell County
Middle School
Campbell County

Pam Freibert
EconomicsAmerica in
Kentucky

Winnie Gardner, Teacher
Johnson Central High School
Johnson County

Social Studies Committee

Nancy Gilligan,
Resource Teacher
Fayette County

Tish Hamilton, Teacher
Johnson Central High School
Johnson County

Sandy Hayes,
EconomicsAmerica in
Kentucky

Jeanette Hodges, Teacher
Highlands High School
Ft. Thomas Independent

Dee Hutchines, Teacher
Lee County High School
Lee County

Sandy Langer, Teacher
East Jessamine High School
Jessamine County

Marcia Lile,
Clark Fellow
Jefferson County

Jack Morgan
EconomicsAmerica in
Kentucky

Ann L. Morris, Teacher
Northern Middle School
Pulaski County

Keith Mountain, Professor
University of Louisville

Judith Mullins
Junior Achievement
of Kentucky

Sherry Nelson, Teacher
Johnson Central High School
Johnson County

Lisa Petrey-Kirk, Teacher
Anderson County Middle
Anderson County

Debbie Powers, Teacher
Anchorage Middle School
Anchorage Middle

Steve Thompson, Teacher
Rowan County High School
Rowan County

World Languages Committee

Jean Amick, Teacher
Kentucky Country Day School
Louisville

Estelle Bayer, Teacher
Madison Central High School
Madison County

Georgette Bouvy, Teacher
Maxwell Elementary
Fayette County

Berta Calvert, Curriculum
Specialist
Jefferson County

Wanda Chandler
Special Education
Consulting Teacher
Fayette County Schools

Diane Jeter, Teacher
Paul Laurence Dunbar
High School
Fayette County

Julie Maddox, Teacher
Latonia Elementary
Covington Independent

Denise Munizaga, Foreign
Language Supervisor
Fayette County

Mary Jo Netherton, Professor
Morehead State University

Barbara Nett, Teacher
Pleasure Ridge Park
Jefferson County

Sharon Stockley, Teacher
Anchorage School
Anchorage Independent

Susan Stuckler, Teacher
Paul Blazer High School
Ashland Independent

Ruth Styles,
Distance Learning Specialist
Kentucky Educational
Television
Lexington

Diane Taylor, Teacher
Dupont Manual High School
Jefferson County

Jacque Van Houten,
President
Kentucky Council of Teachers
of Foreign Languages

World Languages Committee

Tom Welch, Principal
East Jessamine High School
Jessamine County

Exceptional Children Committee

Linda Allen
Project Scimatch
Elementary Resource Teacher
OVEC

Sandra Blair Boyer
Special Education Teacher
Minors Lane Elementary
Jefferson County

Jennifer Grisham Brown
Associate Professor
University of Kentucky

Ralph Bartley
Superintendent
Kentucky School for the Blind

Brenda Breashear
Special Education Teacher
Perry Central High School
Perry County

Mike Burdge
Special Education Teacher
White's Tower Elementary
Kenton County

Linda Berger
Special Education Consulting Teacher
Stuart Middle School
Jefferson County

Sandy Byrd
Special Education Teacher
Spencer County High School
Spencer County

Anita Burnette
Special Education Teacher
Owensboro High School
Owensboro Independent

John Biendenbender
Special Education Consulting Teacher
Ballard High School
Jefferson County

Angela Cain
Special Education Teacher
Stanford Elementary
Lincoln County

Kay Combs
Special Education Consulting Teacher
Camp Taylor Elementary
Jefferson County

William L. Bird
Special Education Consulting Teacher
Kammerer Middle School
Jefferson County

Julie Carroll
Special Education Teacher
Grayson County High School
Grayson County

Charlene Cornett
Special Education Teacher
Scott County High School
Scott County

Elma P. Blackwell
Special Education Consulting Teacher
Jefferson County

Latricia Bronger
Special Education Teacher
South Oldham High School
Oldham County

Stella Crutcher
Special Education Teacher
Scott Co. Ninth Grade Center
Scott County

Rhonda Boyd
Special Education Teacher
Scott County Middle School
Scott County

Exceptional Children Committee

Rosemary Dawson, Teacher
Special Education Teacher
Kentucky School for the Blind
Louisville

Beverly Henderson
Director of Special Education
Franklin County

Marta Kessinger
Special Education
Consulting Teacher
Thomas Jefferson
Middle School
Jefferson County

Kim Finnell
Special Education Teacher
Shelby County High School
Shelby County

Lisa Herner
Special Education Teacher
Mt. Washington Middle School
Bullitt County

Harold Kleinert
Director of Training
Interdisciplinary Human
Development Institute
University of Kentucky

Alan Glasgow
Special Education
Consulting Teacher
Newburg Middle School
Jefferson County

Elizabeth Hicks
Special Education Teacher
Boyd County High School
Boyd County

Donna Laswell
Special Education Teacher
Kentucky School for the Deaf
Danville

Lynn Glenn
Special Education
Consultant Teacher
Tully Elementary
Jefferson County

Mark Hurte
Special Education Teacher
Lincoln County Middle School
Lincoln County

Jackie Lawless
Special Education Teacher
Russell Springs High School
Russell Springs Independent

Donna Grigsby,
Special Education Teacher
Shelby West Middle
Shelby County

Robert Jacobs
Special Education
Consulting Teacher
Cochran Elementary
Jefferson County

Amy Longwill
Special Education Teacher
Danville High School
Danville Independent

Meada Hall
Special Education Teacher
East Jessamine Co. High
Jessamine County

Jackie June
Special Education
Program Coordinator
Jefferson County

Bill Melton
Principal
Kentucky School for the Deaf
Danville

Cathy Harris
Special Education Teacher
Berea Community Schools
Berea Independent

Jacqui Farmer Kearns
Federal Program
Coordinator
Interdisciplinary Human
Development Institute
University of Kentucky

Randy Mills
Resource Teacher
Jefferson County

Lawrence Hayes, Professor
Director of Interpreter
Training Program
Eastern Kentucky University

Sara Kennedy
Alternate Portfolio
Coordinator
University of Kentucky

Jeanna Mullins
Assistant Project Director
Transition Collaborative
University of Kentucky

Exceptional Children Committee

Vicki Basham
Resource Pre-Kindergarden Specialist for Early Childhhood
Jefferson County

Deborah Plumb
Special Education Teacher Consultant
Jefferson County

Dawn Stinson
Special Education Program Coordinator - Low Incidence
Fayette County

Pat Murphy
Special Education Teacher Consultant
Hopkins County

Lauren Pohl
Special Education Consulting Teacher
Hawthorne Elementary
Jefferson County

Sister Sharon Sullivan
Professor
Brescia College
Owensboro

Tricia Ney
Special Education Teacher
River Ridge Elementary
Kenton County

Marsha Priddy
Special Education Consulting Teacher
Trunnell Elementary
Jefferson County

Jeff Sutton
Physical Education Teacher
Bold Knob Elementary
and Peak Mill Elementary
Franklin County

Nick Nicholson
Special Education Consulting Teacher
Norton Middle School
Jefferson County

Bill Roberts
Special Education Consultant
Fayette County

Karin Tamme
High School English Teacher
Kentucky School for the Deaf

Ruth Peace
Special Education Teacher
Williamsburg High School
Williamsburg Independent

Ruth Sandefur, Professor
Interpreter Training Program
Eastern Kentucky University

Joyce Taylor
Special Education Teacher
Berea High School
Berea Independent

Rhonda Petrey
Special Education Teacher
Williamsburg High School
Williamsburg Independent

Sharon Shook
Special Education Teacher
Central High School
McCreary County

Janice Triplett
Special Education Teacher
Ohio County High School
Ohio County

Cindy Phelps
Special Education Consulting Teacher
Fern Creek Elementary
Jefferson County

Linda Sheffield, Professor
Northern Kentucky University

Alexis Varney
Resource Teacher Consultant
Jefferson County

Jean Phillips
Special Education Consulting Teacher
Auburndale Elementary
Jefferson County

Steve Slaughter
Physical Education Teacher
Spencer County High School
Spencer County

Carolyn Wheatley
Speech-Language Therapist
Bluegrass Middle School
Hardin County

Exceptional Children Committee

Melinda Wright
Special Education Teacher
North Hardin High School
Hardin County

Elisha Zuaro
Vision Teacher
Kentucky School for the Blind

Roxanne Yeoman
Special Education
Consulting Teacher
Noe Middle School
Jefferson County

Lou Young
Director of Curriculum
Jessamine County

Elementary Education Committee

Linda Allen,
Elementary Resource Teacher
Project Scimatch
OVEC

Peggy Bahr,
Primary Teacher
Fairdale Elementary
Jefferson County

Claire Batt,
Elementary Language Arts
Fayette County

Kathy Berry,
Intermediate Teacher
Summit Elementary
Boyd County

Wendy Birch,
Primary Teacher
Bridgeport Elementary
Franklin County

Kay Brown, Principal
Foust Elementary
Owensboro Independent

Jan Bollinger,
Primary Teacher
Vine Grove Elementary
Hardin County

Angela Cain,
Special Education Teacher
Stanford Elementary
Lincoln County

Karen Cheser,
Curriculum Specialist
Kenton County

Audrey Coger
Primary Program Coordinator
Fayette County

Sally Davis,
Intermediate Teacher
Liberty Elementary
Casey County

John Duckworth, Principal
A. B. Chandler Elementary
Henderson County

Pam Ellis, Assistant Principal
Liberty Elementary
Casey County

John Finch, Principal
LaGrange Elementary
Oldham County

Belinda Hitch,
Primary Teacher
Tilden Hogge Elementary
Rowan County

Charles Holiday, Principal
Fulton County Elementary
Fulton County

Judy Leep,
Resource Teacher
Cartmell Elementary
Caroll County

Irene Lepping,
Primary Teacher
Norton Elementary
Jefferson County

Bonnie Luckett,
Primary Teacher
Lebanon Elementary
Marion County

Jennie McMakin,
Technology Instructor
Coleridge-Taylor
Jefferson County

Jenny Marshall,
Primary Teacher
St. Francis Elementary
Oldham County

Sara Monarch,
Primary Teacher
Southside Elementary
Shelby County

Teresa Morgan,
Primary Teacher
Woodland Elementary
Hardin County

Sheila Muncy,
Intermediate Teacher
Summit Elementary
Boyd County

Tanya Nicholson,
Primary Teacher
Manchester Elementary
Clay County

Earl Ogata,
Intermediate Teacher
Johnson Elementary
Fayette County

Diane Patrick,
Intermediate Teacher
Summit Elementary
Boyd County

Elementary Education Committee

Linda Phillips,
Title One Resource Consultant
Covington Independent

Roslyn Poole,
Curriculum Specialist
Goshen Elementary
Oldham County

Martha Sandusky, Principal
Lebanon Elementary
Marion County

Tim Sears,
Primary Teacher
Anchorage School
Anchorage Independent

Brenda Sipes,
Intermediate Teacher
Shearer Elementary
Clark County

Jeff Sutton,
Physical Education Teacher
Peaks Mill Elementary
Franklin County

Jean Turner,
Gifted/Talented Teacher
Lancaster Elementary
Garrard County

Rick Vincent, Principal
Kathryn Winn Elementary
Carroll County

Judy Whitson,
Resource Teacher
Bristown Elementary
Warren County

Diana Whitt, Principal
Summit Elementary
Boyd County

Gerda Wise
Intermediate Teacher
Cartmell Elementary
Carroll County

Barbara Young,
Gifted/Talented Teacher
Fulton County Elementary
Fulton County

Elementary Level
Implementation Manual

Table of Contents

Table of Contents (cont.)

Table of Contents (cont.)

Scope and Purpose

The *Implementation Manual for the Program of Studies* provides a framework for designing curriculum models that incorporates content outlined in the *Program of Studies*. Interdisciplinary models are included for the primary and intermediate levels (grades four and five), and discipline-based models are included for the intermediate level. The manual is intended both as an administrative and instructional resource on curriculum development and implementation issues. While use of this manual is optional, it is hoped that teachers will find it a useful resource.

The introductory section of the manual includes program guidelines (e.g., statutory framework of the primary program, curriculum development, classroom organization, integrating curriculum and instructional practices) and general information (e.g., school governance, school environments, and program standards for exceptional children). However, the manual consists mainly of curriculum models. The models are not intended to be prescriptive in nature, but rather they offer suggestions on how required content (arts and humanities, English/language arts, health, mathematics, physical education, science, social studies) can be presented effectively to elementary students.

As teachers work with the *Program of Studies* and *Implementation Manual*, they will create other models or unit frameworks to address required content. As those models or unit frameworks are completed, teachers are encouraged to submit them to the Kentucky Department of Education for distribution. Submission information is located at the end of the introduction section on page 91.

How to Use This Manual

Model Format—Interdisciplinary Models

The interdisciplinary models for primary and intermediate levels contain a series of unit frameworks that organize content around a variety of broad-based themes (e.g., structure and function of economic systems). The unit frameworks are particularly compatible to the ungraded primary program and useful for transitioning students from the primary to the intermediate level.

Use of the interdisciplinary models does not preclude consideration of other appropriate models. No single model for learning will meet the needs of every student, every teacher, or every school. The possibilities of adaptation, refinement, and creativity in developing and selecting models are limitless and driven by students' needs and interests. The following are models that also may be considered.

- **Discipline-based models** enable teachers to address the specific skills, concepts, and knowledge of an identified discipline. Teachers plan and present instruction in content areas independently.

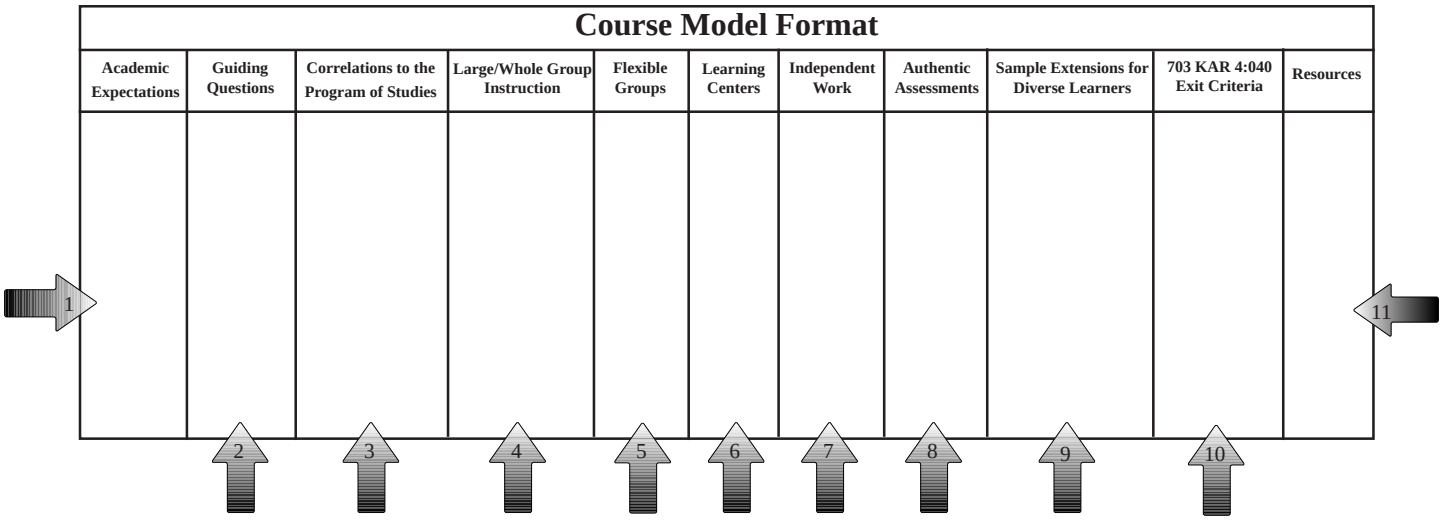
- **Parallel-disciplines models** encourage teachers to rearrange the order of topics to align with corresponding information presented by other teachers. Joint planning is required to identify the sequence of presentations.

- **Multidisciplinary models** permit teachers to work together in planning instruction of related concepts from two or more disciplines. Teachers jointly identify the topics or themes to be addressed;

- **Complete program models** allow students to become immersed in a topic of study. Students live in the school environment and create the curriculum from their own interests. Teachers become true facilitators, and students are empowered by a sense of independent learning (adapted from the work of Heidi Hayes Jacobs cited in Transformations, p. 13).

Each primary and intermediate model includes all academic expectations and appropriate content bullets from the *Program of Studies*. While some unit frameworks contain slight variations, the format for each is essentially the same. An annotated model is found below. Unit frameworks begin with an overview page that contains background information including

- instructional approaches,
- program level (e.g., primary level),
- broad-based themes
- content areas,
- supplemental content areas,
- unit framework overviews, and
- guiding questions.



Following the overview is a series of pages with each pair of pages organized around a guiding question. The first column (1) contains academic expectations, statements indicating what students should know and be able to do when they exit Kentucky schools (see the Kentucky Department of Education Web Site <http//www.kde.state.ky.us> for a listing of Kentucky's Learning Goals and Academic Expectations). The column does not contain all academic expectations addressed in the framework, but includes those specifically addressed by the guiding question. The second column (2) contains guiding questions. Guiding questions focus the learning and instruction for students and teachers throughout the unit framework. These are broad-based, engaging questions that students should be able to answer by the end of the unit. Although some unit frameworks have single guiding questions, most have multiple, closely related questions.

The third column (3) contains correlations to the *Program of Studies*, the content targeted by the guiding question(s) and sample activities. Content bullets may not be copied verbatim from the *Program of Studies*, but they convey the essence of the content so that it may be located easily.

The fourth through seventh columns represent sample activities that may be implemented in large groups (4), flexible groups (5), learning centers (6), and through independent work (7). The sample activities provide guidance on what can be done, why it should be done, and how student learning will be demonstrated. Often these activities are big ideas, projects that will take several days, weeks, or even a year to complete. These sample activities are intended to be neither comprehensive nor prescriptive: They are a starting point for the development of rich activities that engage students in their own learning and require them to demonstrate what they know and can do.

The eighth column (8) contains sample authentic assessments. These assessments describe student processes and products that reflect application of real-life knowledge and skills. These tasks require students to meet performance standards correlated to the content outlined in the *Program of Studies*.

The ninth column (9), "Sample Extensions for Diverse Learners," contains adaptations to the curriculum to help meet the needs, interests, and abilities of diverse groups of students, including gifted and talented students, exceptional children, children with disabilities, and those with limited English proficiency. These extensions are presented as scenarios that describe hypothetical students and include appropriate methods, materials, services, and instructional environments that facilitate student success. Within each model, thirteen types of extensions are addressed as suggestions for modifying instruction to meet the needs of all learners.

The primary level unit frameworks include an extra column (10). This column, "Exit Criteria for Successful Completion of the Primary Program," identifies exit criteria from 703 KAR 4:040(5) that are addressed through the *Program of Studies* content and sample activities. This information will help teachers plan for students' successful completion of the primary program and facilitate a smooth transition into fourth grade.

The final column (11), "Resources," lists resources specific to each unit framework. The primary level resource column contains the content areas of the *Kentucky Early Learning Profile* (KELP) and categories of learning descriptions or performance indicators described in each (e.g., Reading: Meaning of Text). The *Primary Performance Task Kits* describe additional instructional activities and materials correlated to Kentucky's Learner Goals and Academic Expectations. These activities and materials are framed around *Transformations: A Curriculum Framework* and the *Core Content for Assessment*, documents that provide direction for curriculum, teaching and learning strategies, and content that has been identified as essential for all students.

Model Format--Discipline-based Models

All disciplined-based models are constructed on the same format. Each discipline-based intermediate model includes all academic expectations and appropriate content bullets from the *Program of Studies*. An annotated model is found on page 4. Models begin with an overview page that contains a course overview and guiding and/or essential questions.

Following the overview is a series of pages with each pair of pages organized around a guiding question. The first column (1) contains academic expectations, statements indicating what students should know and be able to do when they exit Kentucky schools (see the Kentucky Department of Education Web Site <http//www.kde.state.ky.us> for a listing of Kentucky's Learning Goals and Academic Expectations).

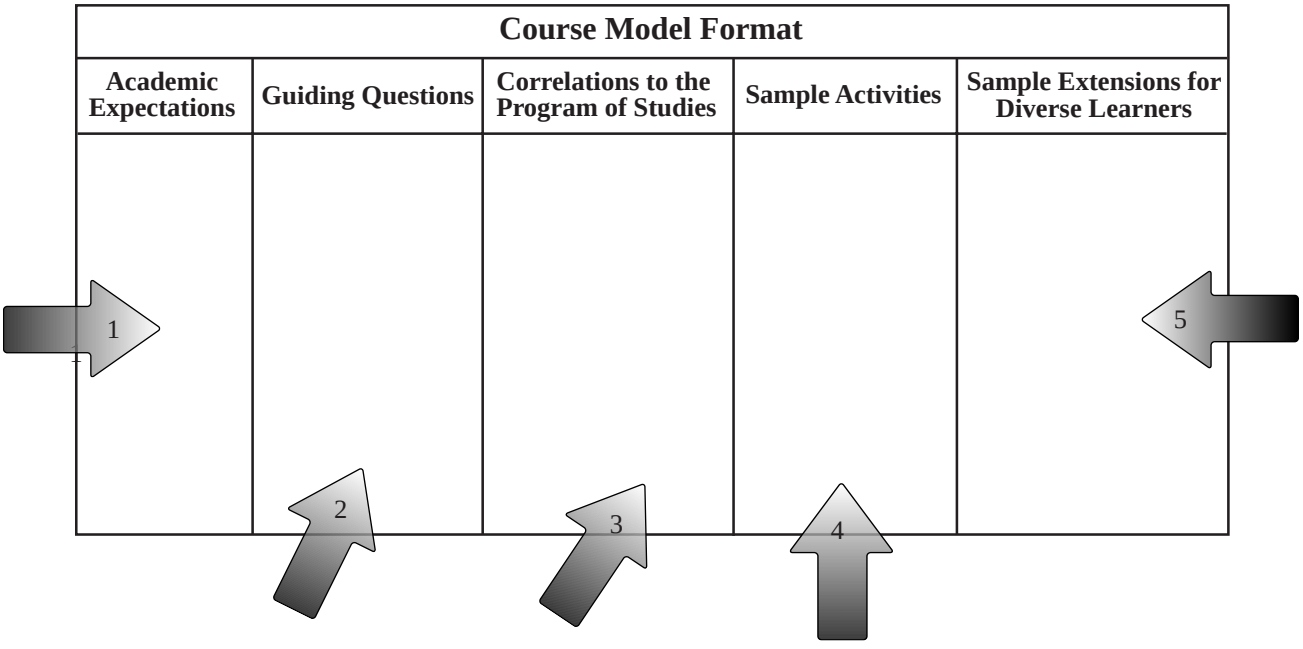
The column does not contain all academic expectations addressed in the model, but includes those specifically addressed by the guiding question.

The second column (2) contains guiding questions. Guiding questions focus the learning and instruction for students and teachers throughout the unit framework. These are broad-based, engaging questions that students should be able to answer by the end of the unit. Although some unit frameworks have single guiding questions, most have multiple questions that are closely related. In addition, essential questions may be included to further focus student learning.

The third column (3) contains correlations to the *Program of Studies*, the content targeted by the guiding question(s) and sample activities. Content bullets may not be copied verbatim from the *Program of Studies*, but they convey the essence of the content so that it may be located easily.

The fourth (4) column, "Sample Activities," contains instructional activities that address the guiding questions. The sample activities provide guidance on what can be done, why it should be done, and how student learning will be demonstrated. Often these activities are big ideas, projects that will take several days, weeks, or even a year to complete. Sample activities include suggestions for the use of technology, open-response questions, community involvement, and writing portfolio entries. These sample activities are intended to be neither comprehensive nor prescriptive: They are a starting point for the development of rich activities that engage students in their own learning and require them to demonstrate what they know and can do.

The fifth column (5), "Sample Extensions for Diverse Learners," contains adaptations to the curriculum to help meet the needs, interests, and abilities of diverse groups of students, including gifted and talented students, exceptional children, children with disabilities, and those with limited English proficiency. These extensions are presented as scenarios that describe hypothetical students and include appropriate methods, materials, services, and instructional environments that facilitate student success. Within each model, thirteen types of extensions are addressed as suggestions for modifying instruction to meet the needs of all learners.



Curriculum and Instruction Documents

The Kentucky Department of Education (KDE), and numerous Kentucky educators, have authored and published several documents that offer assistance on the implementation of the Kentucky Education Reform Act (KERA). The documents have been designed to be used together to guide instruction in the classroom The following are brief descriptions of documents related to curriculum and instruction in Kentucky classrooms.

National Standards

Various content groups have developed national standards for their subject areas. These standards outline content recommended for all students in this country. Some content areas are much more specific than others. National standards exist for English/language arts, science, social studies, various disciplines of arts and humanities, physical education, vocational studies, and mathematics, among others. National standards have been utilized, as appropriate, in the development of Kentucky documents. National standards are available from the respective content associations.

Kentucky's Learning Goals and Academic Expectations

In 1989, Governor Wallace Wilkinson appointed the 12-member Council on School Performance Standards to identify what a high school graduate in Kentucky should know and be able to do. The result of this council's work, which involved gathering public input through a series of hearings, surveys, and focus groups, was adopted into state law as Kentucky's Learning Goals. The council then created 11 task forces to elaborate on these goals by identifying specific academic expectations on which to base curriculum and assessment. Kentucky's Learning Goals and Academic Expectations are the basis for curriculum documents developed by KDE.

Program of Studies for Kentucky Schools Primary -12

The *Program of Studies* identifies overall academic content to be included in the curriculum. It was revised in 1998 to ensure that all students across the Commonwealth are provided with the same content and have the same opportunities to learn at high levels. The revised *Program of Studies* specifies the minimum content for the 15 required credits for high school graduation and the content for primary, intermediate, and middle level programs leading to these graduation requirements. Changes reflect new high school graduation requirements and embed academic expectations and *Core Content for Assessment*.

Core Content for Assessment

The core content document represents content that has been identified as essential for all students to know and that which will be included on the state assessment for reading, writing, mathematics, science, social studies, arts and humanities, practical living, and vocational studies. Core content is designed for use with Kentucky's Academic Expectations to provide parameters for test developers as they design assessment items, including multiple choice and open-response questions, as well as on-demand writing prompts and writing portfolios.

Transformations: Kentucky's Curriculum Framework

Published in two volumes, *Transformations* provides direction to local schools and districts as they develop curriculum. It provides benchmarks (demonstrators) of skills, processes, and content knowledge as further explanation of the academic expectations; suggestions on teaching and learning strategies; and multiple resources to assist with the development of curriculum and units of study.

Implementation Manual for the Program of Studies
The *Implementation Manual for the Program of Studies* provides guidance and assistance to schools in the form of instructional approaches, models for configuring content, information on course structures, resources, and glossaries. The courses structures, activities, and strategies included in the document are provided as examples and are not required for implementation.

The manual is organized in three volumes, elementary, middle level, and high school and includes models of required and elective courses and sequences of courses. Introductory sections such as "Guidance and Counseling," "Individual Graduation Plans (IGP)," "School Governance," and "Library Media Services" also are included.

Developing a Standards-Based Unit of Study
This document demonstrates how to develop an effective unit using the Curriculum Planning Map. It includes templates and step-by-step instructions on designing effective instruction through organization of content in units of study.

Designing an Effective Performance Task for the Classroom
The design process for developing performance tasks for classroom use is contained within this document. Six sample performance tasks and accompanying scoring guides are included along with a set of work sheets for use in developing tasks.

Open-Response Questions in the Classroom
Open-response questions are most appropriately incorporated into classroom instruction. This planning guide will take you through the basic steps of development. It includes templates for designing questions and scoring guides, as well as sample questions and scoring guides.

All curriculum documents released from the Kentucky Department of Education can be accessed on the Web Site (http://www.kde.state.ky.us)

School Counseling Services

School counseling programs assist in enabling all students to achieve success in school, and to develop into contributing members of our society. The school counseling program touches and serves every aspect of the school, from dropout prevention and school safety to consolidated planning.

School counselors facilitate the achievement of the six learning goals as set forth in the Kentucky Education Reform Act (KERA) by participating in

- assessment activities,
- curriculum committees,
- cooperative learning groups,
- school improvement activities,
- strategic or consolidated planning efforts,
- school council activities,
- school-to-career initiatives, and
- professional development programs.

The centerpiece of KERA is its vision of what students should know and be able to do as a result of their school experiences. School counselors have the expertise and occupy a unique position from which they can address Kentucky's Six Learning Goals.

Goal 1: Students are able to use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives.

Responsibilities of certified school counselors can include

- providing assistance in this goal's achievement by helping students and parents see the importance of communication in key areas of life, such as educational and career planning, public and community awareness, and personal/social relationships.
- helping students make appropriate selections of courses as they plan for their school program, postsecondary education, or for a career.
- reinforcing the importance of communication skills as they work with students in career planning and course selection.
- encouraging students to practice communication skills as they conduct individual and group activities in such areas as: conflict resolution; assertiveness versus aggression; effective listening; and other important areas.
- working with school staffs by helping them understand student progress and needs, and in developing an appropriate communications and math curriculum.

Goal 2: Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.

Responsibilities of certified school counselors can include

- working directly with students by helping them to see the relationship between school work and their future lives, including postsecondary education, employment, and personal/social life.
- stressing the importance of good attendance and staying in school.
- encouraging students to develop an appreciation for those aspects of the curriculum that enrich their lives via music, literature, and the arts.
- guiding students through group and individual work to examine their interests, aptitudes, and experiences as they relate to self understanding and appropriate educational and career choices.
- helping parents understand the abilities, needs, and behaviors of their children.
- assisting school staffs in planning a curriculum that will meet student needs, and also will help the school achieve its goals.
- conducting activities that assist students in overcoming traditional barriers to appropriate educational experiences, such as, assisting girls in maintaining an interest in math and science.
- developing and implementing other important programs such as: tutoring; after school study; extended school services; community and school related programs; and family resource/youth services centers.

Goal 3: Students shall develop their abilities to become self-sufficient individuals.

Responsibilities of certified school counselors can include

- conducting group and individual activities in positive self concepts, substance abuse, personal safety, family-related issues (e.g., divorce, abuse, death/loss, relocation, sibling relationships), study skills, time utilization strategies, goal setting, conflict management, respecting the rights of others, assertiveness training, peer counseling, self discipline, responsible and nonviolent behavior, decision making, human relations, and critical thinking.
- providing teachers and parents resources, consultation, and training in areas of effective parenting, effective discipline techniques, understanding child growth and development, planning and implementing appropriate education experiences, helping develop student assistance programs, advisor/advisee programs, and classroom management strategies.

Goal 4: Students shall develop their abilities to become responsible members of a family, work group, or community, including demonstrating effectiveness in community service.

Responsibilities of certified school counselors can include

- conducting group and individual activities which promote, reinforce, or allow for practical skills in critical thinking, consideration of new ideas, decision-making, and problem-solving. Such activities might include group counseling; group problem-solving and planning; conflict management; multicultural programs supporting diversity; visits and field trips to areas of the community, work place, or other schools; and community-related work or community services with student opportunities.
- helping to reduce the potentially negative effects of our society's heavy emphasis on competition.
- designing programs which utilize students as leaders, as aides, and as positive role models for other students.
- helping parents and faculties understand barriers to cooperation and how to develop programs and classroom activities which promote responsible group work.
- assisting school staff in being sure that all students are involved in some school activities.
- guiding parents and faculties in developing cooperative behaviors which model appropriate behavior and group work.

Goal 5: Students shall develop their abilities to think and solve problems in school situations and in a variety of situations they will encounter in life.

Responsibilities of certified school counselors can include

- leading activities which promote the application of critical thinking skills, including gathering information and resources, analyzing data, personalizing information about self and other opportunities, and using this information in making appropriate decisions.
- conducting activities such as, educational, career, vocational, and personal/social decision-making; maintaining a career portfolio; conflict resolution; and understanding logical consequences.
- consulting with parents on how to foster and reinforce these skills in their children.
- coordinating with teachers on activities that might be included in their curriculum which help develop these skills.

Goal 6: Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned, and build on past learning experiences to acquire new information through various media sources.

Responsibilities of certified school counselors can include

- helping students develop appreciation and positive attitudes toward learning by providing activities and resources which show how a combination of learning disciplines are essential to the successful pursuit of personal fulfillment and satisfying careers.
- assisting students to understand that learning gains meaning and significance as it builds on previously acquired knowledge.
- planning and coordinating programs which take students outside the classroom into the community and into the world of work.
- facilitating activities to include dropout prevention strategies, identification of students at risk, and development of school attendance and performance incentive programs.

School Governance

Since July of 1990, schools in Kentucky have been directly accountable for developing curriculum (what is to be taught), determining instruction (how course content is delivered to students), and assessing progress of students in their building (KRS 160.345). Councils are legally responsible for making school level policy to enhance student achievement and meet the KERA goals [(KRS 160.345 (2)(c) 1.], on which the Commonwealth's testing and accountability system is based. Principals must administer the policies of the school council, and the entire staff is required to implement the policies.

Because schools are held accountable, Kentucky lawmakers have given school councils some very specific policy responsibilities in the area of curriculum, including but not limited to

- determination of curriculum, including needs assessment and curriculum development. (2)(i)
- assignment of all instructional and noninstructional staff time. (2)(i)
- assignment of students to classes and programs within the school. (2)(i)
- planning and resolution of issues regarding instructional practices. (2)(i)
- selection of professional development. (2)(8)
- selection of textbooks. (2)(g)
- selection of instructional materials. (2)(g)

According to KRS 160.345, when determining the curriculum policy and/or developing the curriculum for their school, school councils must consider the Commonwealth's six goals and the KBE regulations containing the *Program of Studies* and minimum high school graduation requirements for Kentucky students. In order to implement the chosen curriculum, school councils can determine, through policy, how students and staff are assigned to classes and programs in the building, what effective instructional practices staff will use with students, what materials and textbooks students will use, and what types of professional development staff will need in order to implement their curriculum. Additional school council policy areas can by found in KRS 160.345 (2).

Library Media Programs

The purpose of the library media program is to promote student achievement, lifelong learning, and information literacy[1] by helping students

- efficiently and effectively locate, organize and present information relevant to a specific need or problem (Academic Expectations 1.1, 1.10, 1.16);
- critically evaluate, interpret and select information that meets their needs (Academic Expectations 1.2, 1.3, 1.4, 1.16);
- function as independent learners by using library media resources as well as resources beyond the school site (Academic Expectations 1.1, 1.12, 1.4, 1.16, 3.7); and
- pursue areas of personal interest through reading and research in the library media center and beyond (Academic Expectations 1.2, 3.7, 5.1, 5.5).

The library media program is an essential part of the school's instructional program, providing services to the entire school community. Both the library media center and the library media specialist are accessible to all students during the school day and support each curricular area as well as the interests and self-education needs of individual students. Library media collections should be developed and evaluated collaboratively with teachers and others in the school community to support and enhance the school's curriculum and to meet students' diverse learning styles and needs.

To promote learning, the library media program

- provides a range of information and services including print, nonprint, and electronic resources;
- provides physical, flexible, and equitable access to all information resources to support diverse learning abilities, styles, and needs;
- encourages students to engage in reading, viewing, and listening for understanding and enjoyment;
- includes appropriate, current and accurate print and nonprint resources for supplemental and leisure reading;
- includes appropriate, current and accurate print and nonprint resources for research/inquiry in subject areas; and
- includes appropriate, current and accurate print and nonprint resources to meet the instructional and professional needs of teachers.

The library media program should provide activities to promote reading, student achievement, and lifelong learning in a climate conducive to learning. To promote student achievement of learning goals, the library media program must be essential to both learning and teaching and fully integrated into the objectives and content of the school's curriculum.

The school library media programs encourage students to

- employ successful research/inquiry strategies and evaluate resources which stress critical thinking.
- develop multimedia products to relate information to whole group.

[1] "Information literacy, the ability to locate, process, and use information effectively, equips individuals to take advantage of the opportunities inherent in the global information society" (Association for Supervision and Curriculum Development, 1991).

- responsibly use the intellectual property of others from all formats (e.g., print, nonprint, electronic) and credit accurately.
- read for entertainment as well as knowledge-building.
- collaborate with others, both in person and through technology, to create and evaluate information products.

The library media specialist should teach information literacy, inquiry strategies, and effective use of the library media center. The library media specialist should model and promote collaborative planning, curriculum development, and effective teaching. Also, the library media specialist should model technology integration for learning and for teaching. The library media specialist collaborates with teachers to

- teach the information literacy process with emphasis on successful inquiry strategies and evaluation of resources to stress critical thinking.
- guide student(s) in multimedia production.
- encourage individual and/or small group projects which are initiated by student interest.
- guide students to incorporate information from print and electronic resources in student products.
- stress responsible use of intellectual property of others in all formats (e.g., print, nonprint, electronic).
- encourage critical reading of all assignments to promote higher order thinking.
- encourage students to read for entertainment as well as knowledge-building.
- select materials for use by students and teachers.

Additional information can be found in *Online II: Essentials of a Model Library Media Program* which is located on the Internet in the Library Media Specialist Academic Village <http://lmsvillage.k12.ky.us> under "Resources."

Exceptional Children

Introduction

The section of this manual on "Designing Your Classes or Unit Frameworks," identifies the importance of understanding the characteristics, needs, and abilities of your students when you design and deliver unit frameworks or classes for elementary students. Critical components of designing quality and effective unit frameworks and classes include thinking about who the students are; how to organize the content to make sure each student has the opportunity to learn; how to design intentional well connected learning activities; and what extensions (accommodations and specially designed instruction) are necessary to incorporate into the unit framework or class design and delivery. For more information about extensions refer to pages 53-65.

This section of the manual addresses guidelines for providing instruction to exceptional children based on the *Program of Studies*. Exceptional children are children with disabilities and children who are gifted and talented. This section covers the curriculum framework for all students and how it applies to exceptional students; a context for making decisions about an exceptional child's course of study and the design of unit frameworks and classes using a functional approach. It is important to understand what the curriculum framework is for all students and how it applies to exceptional students.

Curriculum Framework for All Students

What is the Curriculum Framework that guides instruction for students with disabilities and students who are gifted and talented?

Kentucky expects all students to achieve at high levels and holds schools responsible for providing learning experiences and curricula that ensure this achievement. Kentucky's Learning Goals and Academic Expectations define what all students, including all exceptional students should know and be able to do as a result of progressing through an educational course of study in Kentucky's schools. The Learning Goals and Academic Expectations provide the anchor for everything else we use to develop content standards, curricula, courses, units of study, and instructional plans.

The *Program of Studies*, written to be inclusive of all students, contains the required content standards correlated with the Academic Expectations and the *Core Content for Assessment* for all students primary through high school. It incorporates national standards for the content area and defines the standards for the high school graduation requirements.

Transformations: Kentucky's Curriculum Framework is a document schools have used as a technical assistance guide for curriculum development. It is also based on the Learning Goals and Academic Expectations illustrating demonstrators as benchmarks of learning. It is a supportive document that remains a valuable tool for curriculum, course, and unit development. You will find that *Transformations* provides guidance in designing learning experiences for all students, including exceptional students. *Transformations* contains teaching strategies and examples of activities that might be used at various school levels.

Individual student planning for exceptional children is anchored in what we want all students to know and be able to do—the general education curriculum. Individual instructional planning supports the attainment of the six learning goals and academic expectations and, therefore, is carefully and intentionally designed to make clear connections for student learning. The complexity and depth of content may vary based on each student's needs, interests and abilities as well as the types of learning experiences, the pace of learning, how students demonstrate their learning, and the tools needed to learn. Critical to student success is teacher knowledge of content and a range of instructional strategies to communicate the content. For exceptional students, keep the following points in mind.

Individual student planning for all exceptional students

- supports student learning by defining how students in Kentucky will access curriculum and instruction;
- actively involves students in the content;
- involves selecting meaningful goals and objectives which lead to acquisition of content, skills and processes that will help them access the general education curriculum;
- provides for continuous progress;
- includes necessary support structures, materials and resources; and
- involves collaborative planning among general education teachers certified in content areas, special education, gifted education, Title 1 teachers, and other support personnel.

Discipline-based content is critical for all students to be successful at school, at home, on the job, and as a contributing citizen. We use science, social studies, mathematics, language arts, arts and humanities, and practical living as life long learners and, therefore, students need to know the content. However, students with disabilities frequently have significant challenges in areas that impact learning content; that is, they lack or do not use efficient strategies for reading, writing, and math; memory strategies; or strategies for efficiently processing information. They also may have sensory impairments including vision and hearing losses; social, emotional and behavioral issues; or cognitive issues that interfere with learning content if there are no extensions for learning. Extensions can be provided to support learning. However, extensions will not be beneficial if the student cannot link reading, writing, and math to content; use extensions to respond to content, read about the content, listen to the content, and demonstrate what they know about the content; or develop other ways to learn content.

The Individual Education Program (IEP) or 504 Plan, developed for students with disabilities, is designed to help students with disabilities access and move through the curriculum to achieve higher levels of knowledge and reach Kentucky's Learning Goals and Academic Expectations designed for all students. That is why it is so important to embed instruction for students with disabilities in the context of content. An IEP or 504 Plan targets individual student goals and objectives essential to reaching the academic expectations. They include services, supports, and extensions needed by the student to be involved and progress in the general education curriculum. An IEP is not a student's total curriculum. It is a support system to enable a student to access general education curriculum as defined in the *Program of Studies*.

For students with disabilities, achieving results requires

- knowledge of the content for the discipline;
- intentional and deliberate planning of instruction;
- selection and implementation of research-based practices which improve student learning;
- rich and engaging content connected to real-life applications and authentic contexts;
- instructional alignment of IEPs and academic expectations, content standards, school curricula, and unit and lesson planning;

- supplementary aids and services to support the opportunity to learn and access to the general education curriculum; and
- remediating, teaching strategies, or circumventing their barriers to accessing content.

Content for students who are gifted and talented in one or more of Kentucky's recognized areas (i.e., intellectual, creativity, academic, leadership, and visual and performing arts) must challenge the individual student based on the student's needs, interests and abilities. For these students, it is important to arrange for extensions and design unit frameworks, classes, and instruction to meet their challenging needs. Using continuous progress strategies will help you identify what your students already know and what they are ready to learn. Providing extensions such as varying the complexity of the content, accelerating the pace, and providing alternative ways for students to demonstrate what they know opens the course to challenge students ready to learn at various levels. Extensions are designed to replace or modify an instructional or assessment activity rather than add an additional task to be assigned after completing a whole class assignment.

Therefore, special education, gifted education, and general education teachers must work collaboratively as they plan, design, and deliver curriculum to assure appropriate instruction for exceptional students. As the process of designing courses of study is initiated, remember that courses, unit framework, classes, and lesson plans for exceptional students

- are anchored in specific content of the general education curriculum with appropriate extensions for depth and complexity of content based on student needs, interests, and abilities;
- include a range of instructional strategies and instructional routines to deliver content;
- provide a range of continuous assessment options for students to demonstrate learning;
- anchor learning and assessment activities in meaningful (real world) contexts; structured around an issue, a problem, or guiding or essential questions which assist students with connecting and integrating their learning experiences with a framework for learning;
- are designed and implemented to facilitate students making explicit connections;
- are inclusive of a variety of materials and technology supports which allow a student to access content in a variety of ways; and
- are designed to develop the skills and processes a student needs to maximize access and success in the general education curriculum.

You can think of all these structures—Kentucky's Learning Goals, Academic Expectations, *Program of Studies, Transformations: Kentucky's Curriculum Framework*, the *Core Content for Assessment*, local curricula, classes, instructional units, and individual student planning including IEPs or 504 Plans—as the building blocks for student learning in Kentucky. All parts are interconnected and supportive blocks which build a competent student who reaches Kentucky's Learning Goals, Academic Expectations, and lifelong goals of successful transition to employment, postsecondary education, and other life choices.

High School Graduation Requirements

How do the new high school graduation requirements and the Program of Studies impact decisions about what we teach, how we plan, and how we deliver instruction for exceptional children at the primary, intermediate, middle, and high school levels?

As elementary level teachers, it is important to understand the high school graduation requirements and how the content you teach and the instruction you provide directly relate to preparing students to successfully meet the requirements. The foundation for future learning is developed at the elementary level. Take time to review the high school graduation requirements, the content standards for the high school, middle school, intermediate, and primary levels and the relationships among them. Elementary teachers begin childrens' learning experiences and must provide successful, nurturing, and positive environments.

For exceptional children, as for all children, the elementary years are a time for children to learn foundational concepts, language, basic skills, critical and creative thinking, problem solving strategies, and content knowledge. Throughout the *Implementation Manual* there are many ideas for creating unit frameworks, classes, extensions for learning, and developing rich, engaging classroom activities and environments to support student learning. For example, you will see as you review the content standards and the unit frameworks, the teaching of Algebra does not begin at the high school but begins in primary. As you keep the goal of high expectations for all students, you may need to try numerous instructional approaches to support a student's learning and facilitate his or her reaching high expectations.

Schools and school districts are responsible for coordinating instructional programs across grade levels and among schools within districts. A coordinated curricular approach ensures that all students have opportunities to experience success with Kentucky's Learning Goals and Academic Expectations. It also provides for a thoughtful continuum of content and skills across grade levels while assuring coverage of all content outlined in the *Program of Studies*.

The High School Graduation Requirements are found on the next page. The chart "What's New and What's the Same for Exceptional Children" (see page 17) provides an overview of changes in the high school graduation requirements and the *Program of Studies*, including some key changes as applied to exceptional children. One of the key changes is that content standards for all students, primary through high school, are now defined in the *Program of Studies*. Also, the *Program of Studies* requires special and gifted education teachers to collaborate with teachers certified in content areas to design, develop and plan for the delivery of content instruction and courses for high school credit. For students with disabilities, the Admissions and Release Committee or 504 Committee will decide how and when collaboration will take place, and the appropriate placement for services based on an individual student's needs.

There is also a new definition for "functional." For many teachers, the new definition for "functional" will change how you think about content, course and class design, unit frameworks and delivery of instruction. Discussions regarding functional approaches to instruction can be found on pages 69-76. The functional approach is appropriate for use with all students at all levels.

High School Graduation Requirements

The following chart outlines the new high school graduation requirements summarized from 704 KAR 3:305.

New Minimum High School Graduation Requirements for the Class of 2002		
Subject	**Credits**	**Courses**
Language Arts	4	English I, II, III, IV
Social Studies	3	Credits to incorporate U.S. history, economics, government, world geography, and world civilization
Mathematics	3	Algebra I, Geometry, and one elective
Science	3	Credits to include life science, physical science, and earth/ space science
Health	1/2	
Physical Education	1/2	
History and Appreciation of Visual and Performing Arts	1	History and Appreciation of Visual and Performing Arts or another arts course which incorporates such content
TOTAL: 15 required credits plus 7 electives (22 credits)		
Individual Graduation Plan: Each student shall complete a program that emphasizes career plans and courses. IGPs can be altered by students and parents.		

Program of Studies
What is New and What is the Same for Exceptional Children

What is new?	What is the same?
• *Program of Studies* is aligned with Kentucky's Learning Goals, Academic Expectations, and Core Content. • "Rigorous content" for functional classes refers to the content identified in the *Program of Studies*. • Integrated or interdisciplinary courses are planned and designed collaboratively with teachers certified in content areas. • High school courses delivered by special education teachers are collaboratively planned and designed by special education teachers with general education teachers certified in content areas. The admissions and release committee process documents the collaborative course development. • Schools do not need approval from KDE to teach an elective course; if an integrated, applied, interdisciplinary, or functional course is substituted for a required course for graduation, a rationale and course description must be provided to KDE. • Individual Graduation Plan (IGP) format is aligned with the new high school graduation requirements and the *Program of Studies.* • Pathways to Careers replaces Special Vocational Program of Studies/the World of Work. • "Functional" is redefined as an approach to designing and delivering content to all students. • Individual Disabilities Education Act, as amended 1997, requires Individual Education Programs (IEPs) to be anchored in the general education curriculum and to support access to, participation in, and progress in the general education curriculum. • IEPs include supplementary aides and services to support the opportunity to learn and access to the general education curriculum. • Certificate Program for Students with Moderate to Severe Cognitive Disabilities is aligned with the eligibility criteria for the Alternate Portfolio. • Elementary Service Delivery Standards for students with Moderate and Severe Disabilities are aligned with instructional practices of the Alternate Portfolio Assessment.	•For students with disabilities, the student's Admissions and Release Committee (ARC) determines placement. • Special education teachers providing resource or special class plan services may teach high school courses and grant high school credits to students with disabilities. • Eligibility criteria for the Certificate Program is the same. • School councils set policy for curriculum. • Schools continue to have flexibility in organizing and delivering content in primary through high school. • Schools continue to provide services matched to the needs, interests, and abilities of students who are gifted and talented. • Instruction for students is based on continuous progress. • Instruction is delivered across school and non-school settings (community, job sites). • Honors and Advanced Placement courses continue to be options for meeting the academic needs of advanced level students. • Honors courses continue to be offered in middle school to meet advanced academic needs of students. • Students may receive high school credit for courses taken in middle school that meet the high school content standards and other provisions outlined in this manual and the *Program of Studies.* • Content builds from one level to another (i.e., primary to intermediate to middle to high school).

Programming for Elementary Students with Moderate and Severe Disabilities

Overview

This section of the exceptional children program description is intended to provide the reader with a broad framework for the development of individualized, elementary level programs for students with moderate to severe disabilities. Direction is also provided regarding alternate portfolio eligibility determination. Referenced throughout are additional resources and links to more in-depth information to support program design and implementation.

Appropriate programming for elementary level students with moderate to severe disabilities cannot be implemented by a special education teacher acting in isolation and can be successfully implemented only through a strong team effort. This team must include the building-level administrator, special education teacher, collaborating general education teachers, and related service personnel as needed. The student's family can be especially helpful, and whenever possible the student him/herself should be included. Nondisabled peers also have proven to be valuable members of this team.

This section is organized into three basic parts:

- Alternate Portfolio Assessment Eligibility and Relationship to Instructional Programming
- Service Delivery Standards
- Policy Issues Related to Service Delivery Standards

Alternate Portfolio Assessment Eligibility and Relationship to Instructional Programming

Kentucky's school accountability system is inclusive of all students. For some students, participation in the regular state assessment system, even with accommodations and modifications, does not reasonably measure their achievement. When elementary level students have a moderate to severe disability that requires consideration of an alternate form of participation in state assessment, they are to be considered for eligibility for the Alternate Portfolio Assessment during the primary or fourth-grade year. The alternate portfolio is completed and scored at the end of fourth grade. A fourth-grade student is any student that is nine years old as of October 1. Eligibility for participation in the Alternate Portfolio Assessment is determined by the Admissions and Release Committee (ARC), which at a minimum is comprised of a special education teacher, regular education teacher, school administrator, parent, support staff as needed, and the student where appropriate. Determination of eligibility for the alternate portfolio has significant implications for the type of special education services to be provided during the elementary years. Students whose Alternate Portfolio Assessment eligibility is confirmed from elementary through middle level and onto high school do not receive a diploma upon school completion, but rather they receive a certificate of program completion. Both Alternate Portfolio Assessment eligibility and certificate program eligibility at the high school level are based on the same set of student characteristics. It is extremely important to explain to parents and the student that alternate portfolio eligibility indicates that the elementary level academic core curriculum is not going to serve as the sole source of instruction as the student will need extensive instruction in functional skills. Academic skills will still be taught but will be embedded in the context of teaching functional activities. In both cases, students who shall be considered are those whose limitations in cognitive functioning prevent the completion of *Kentucky's Program of Studies* even with extended school services and other program

modifications and adaptations. Eligible students require extensive instruction in multiple, community-based settings to ensure skill acquisition and maintenance and generalization to real-life contexts. The eligibility criteria for the Alternate Portfolio Assessment should be in place from the beginning of the primary program. This extensive information regarding previous ARC consideration of alternate portfolio eligibility is a strong indicator of the appropriateness of future certificate program eligibility.

Actual determination of certificate program eligibility will be determined prior to the student exiting eighth grade and transitioning into high school. State data indicates that approximately .06 percent of public school students (i.e., those students with the most significant cognitive disabilities) meet the eligibility criteria for the alternate portfolio. Anytime a local district has data indicating higher percentages of students being determined eligible for an Alternate Portfolio Assessment and/or for the certificate program, there needs to be a thorough review to assure the eligibility determination process is being carried out appropriately.

ARC Determination of Alternate Portfolio Assessment and/or Certificate Program Eligibility

Criteria for determining eligibility of students with disabilities for the Alternate Portfolio Assessment is based on the Kentucky Department of Education (KDE) Program Advisory on *Procedures for the Inclusion of All Students in the KIRIS Accountability and State-Required National-Reference Assessments (1/97).* Certificate program eligibility is based on the requirements as stated in *Kentucky's Program of Studies.* The same five eligibility criteria are used in both documents to delineate the learning characteristics and needs of students with moderate to severe cognitive disabilities. Each of these five eligibility criteria are addressed below with an expanded description of what is entailed in determining if a student meets the requirements.

Students with disabilities will participate in the Alternate Portfolio Assessment and or qualify for the certificate program upon exiting the eighth grade when the student's ARC has

- determined and verified through the ARC process that the student meets all five of the eligibility criteria,
- documented in the student's record the basis for the committee's decision, using current and longitudinal data (e.g., including performance data across multiple settings in the areas of academics, communication, cognition, social competence, recreation/leisure, domestic, community living and vocational skills; behavior observations in multiple settings; adaptive behavior; and continuous assessment of progress on IEP goals and objectives). This will help ensure that the student meets the following five eligibility criteria:

1) The student's demonstrated **cognitive disability** and adaptive behavior prevent completing the regular course of study, even with program modifications, adaptations, and extended school services.

A fundamental issue in looking at student eligibility for the Alternate Portfolio Assessment and/or the certificate program is based on the cognitive functioning level of the student. If the students cognitive level is such that they cannot meet the elementary level academic core curriculum requirements as defined in the *Program of Studies,* then the student meets a significant indicator of eligibility for Alternate Portfolio Assessment and for the Certificate Program upon exiting the eighth grade. This assumes there is full documentation of extensive program modifications, adaptations, and/or extended services to allow

the student to be able to adequately achieve in the elementary level academic core curriculum, but in spite of the range and nature of these attempts, the students cognitive ability prevented sufficient progress. Verification of a student's Alternate Portfolio Assessment eligibility through the elementary years is evidence of the student's inability to cognitively deal with academic requirements, and if unchanged should contribute to determining eligibility for the certificate program prior to exiting the eighth grade. Eligibility for the Alternate Portfolio Assessment needs to be reviewed on an annual basis throughout the elementary experience to be sure it is still appropriate and that there are no changes in the student's cognitive ability that would enable them to successfully cope with the elementary core curriculum

2) The student's current **adaptive behavior** requires extensive direct instruction in multiple settings to apply functional skills in school, work, home, and community environments.

Documentation must be provided to demonstrate that the student's current adaptive behavior functioning in social competency and independent functioning is limited to the point that the student requires a high degree of direct instruction in natural contexts. This may refer to social skills that need to be developed and/or independent living skills that only are acquired by instruction in natural school, work, home, and/or community settings.

3) The student's inability to complete a regular course of studies is **not the result** of excessive or extended absences nor the result of visual or auditory disabilities; specific learning disabilities; emotional behavioral disabilities; or social, cultural, or economic differences.

A decision for Alternate Portfolio Assessment eligibility or for the certificate program, must based on cognitive, adaptive behavior and generalization problems, and cannot be attribute to factors such as the need for extensive supports, poor school attendance, or the presence of other disabilities. Screening and/or evaluations should clarify the impact on performance from difficulties with vision or hearing and be dealt with as separate issues. Learning disabilities or behavior problems may be present, but cannot be used as reasons for non-participation in the regular assessment. Student diversity as manifested by social, cultural, or socioeconomic differences should clearly not be related to this decision, and efforts need to be taken to analyze the extent to which these factors may be overrepresented in the student population deemed eligible for the Alternate Portfolio Assessment and immediate steps taken to assure proportional presence of these students.

4) The student, when instructed solely or primarily through school-based instruction, is unable to apply academic skills at a minimal competency level in natural settings.

5) The student is **unable to acquire, maintain, and generalize skills** without intensive, frequent, and individualized community-based instruction (CBI).

One of the strong indicators of Alternate Portfolio Assessment eligibility is data that indicates the student cannot use their instruction in real environments unless they receive direct instruction in their actual home, community, and work settings. This is due to a documented problem with generalization of skills taught primarily in school settings. The student needs the natural cues and circumstances associated with the real environment to learn and apply the skills after instruction. This means a need exists for small group and or individual CBI. This is not the same as a field trip experience that just provides awareness or exposure to community settings. While CBI can be a good strategy to foster skill application for all students, the intensity and frequency is much greater for Alternate Portfolio Assessment participants, including the provision of situational assessment in community settings to determine instructional needs.

Once the ARC has collected and reviewed the data related to each of the five points of eligibility for Alternate Portfolio Assessment, the following needs to occur:

- determine and document in the ARC Conference Summary if the student meets each of the eligibility criteria for the Alternate Portfolio Assessment,
- document in writing in the ARC Conference Summary the basis for its decision, and
- assure that the parent is fully informed of the ARC decision.

Access to the General Curriculum

At all age levels, the student must be provided supports and services to be involved in and to progress in the general curriculum, whether delivery occurs in general education settings or in special education settings. Collaboration must occur between special education teachers and general education staff in planning instruction to assure alignment of instruction with Kentucky's Academic Expectations. In accordance with the requirements of *Kentucky's Program of Studies* (704 KAR 3:303), the IEP and/or ARC conference summary should address how and when this collaboration takes place prior to and during the course of implementation of the IEP. Even though student's alternate portfolios and course work are based more on a functional versus academic curriculum, his/her course work still needs to reflect Kentucky's Academic Expectations, demonstrate access to the general curriculum (IDEA, 1997), and reflect a comparable challenge consistent with the goals of the IEP. For elementary students with moderate to severe disabilities, demonstration of these expectations is still to be evident in their alternate portfolio.

The IEP and curriculum link directly to *Kentucky's Program of Studies* and academic expectations. The Alternate Portfolio Assessment is based on the unique learning needs of students with moderate to severe cognitive disabilities, but is still well-grounded and connected to the majority of the academic expectations. While elementary students in the Alternate Portfolio Assessment are not required to demonstrate the same degree of mastery of the academic expectations as other students, they are required to evidence a connection between their instructional activities and the conceptual basis of most of the academic expectations. For example, an elementary student with moderate to severe disabilities may address the academic expectation under Goal 1 of "Students organize information through development and use of classification" (Academic Expectation 1.10). A student with moderate to severe disabilities may meet this expectation by identifying which two items are the "same or different" when given a set of items. They might also sort items by physical characteristics such as color, shape or texture. In each instance, they are still meeting the expectation of "organizing information through development and use of classification," but are adapting the expectation to better fit their unique goals and learning needs.

By embedding instruction in the existing curriculum and daily routines, access to the general curriculum is greatly facilitated while still allowing for student participation in meaningful activities related to their IEP goals and objectives. Students in the Alternate Portfolio Assessment can participate in regular classroom activities in one of four ways. Students may participate in

- curricular activities in the same way as other students,
- the same activities but different level than other students,

- the same activities but different educational goals that are embedded into the classroom activities and routines, and
- a different activity with different goals but related to the classroom activities.

Service Delivery Standards

Appropriate services for elementary students eligible for the Alternate Portfolio Assessment are based on a set of core Service Delivery Standards. These standards are reflective of the Scoring Dimensions and entry requirements of Kentucky's Alternate Portfolio Assessment as well. The following text identifies and explains the eight Service Delivery Standards.

- **Opportunities for choice, decision-making, and self-advocacy,** leading to the goal of self-determination, are systematically embedded into the student's program. This includes the opportunity to be a primary participant in the development of the IEP, but it also extends to being able to make some of the same choices made by other elementary students and to practice decision-making throughout the day. This may mean simple things such as choosing their lunch menu or which friend to sit with in the cafeteria, or how to participate in extracurricular classes like chorus or art.

- Along with the student, **the family is a full partner** in the development of his/her educational program. This does not mean merely sitting in on the IEP meeting and signing off on the forms; this means having a full voice in determining the essential life outcomes for which the IEP is the yearly road map. The process of prioritizing these life outcomes and identifying educational goals with families can be accomplished through personal futures planning or other similar means of family involvement.

- Needed related services (speech/language therapy, physical and/or occupational therapy, rehabilitation counseling, therapeutic recreation) are provided through a **transdisciplinary team approach that embeds critical skills** (e.g., motor, communication) into real-life performances. Isolated therapy approaches do not allow the student to practice the skills in the settings in which those skills are needed. Team members must therefore be willing to share their knowledge and expertise with the other members of the team, to support the attainment of the student's desired life outcomes.

- The student's program provides maximum opportunities for **positive, sustained interactions with nondisabled peers, with the goal of promoting mutual friendships**. This includes social interaction opportunities for participation in cooperative learning in general education classes, school-sponsored extracurricular activities, structured peer tutoring options, and/or natural supports in classroom settings. A critical outcome of education (and one of the best predictors of successful post-school adjustment) is the development of supportive friendships, which can only occur when students share significant amounts of time together as well as common interests and age-appropriate activities.

- The student's program samples a **range of curricular options**, based on the general education curriculum and such life domain areas as vocational, recreation/leisure, and personal management (e.g., community and daily living). At the same time, students must evidence performance of Kentucky's Academic Expectations, as these expectations are intended for all students.

General education courses provide excellent opportunities for the performance of critical interpersonal and cooperative work skills for elementary level students in the Alternate Portfolio Assessment, as well as opportunities for evidencing Kentucky's Academic Expectations. Determination of eligibility for Alternate Portfolio Assessment does not limit or prevent the student's participation in any general education class, if the student's goals can be achieved in the context of the regular education class with appropriate modifications and supports.

- Instruction is provided within the context of **real-life activities with actual performance demands**. Learning and practicing of skills occurs in the setting(s) where the behavior is to occur (e.g., CBI, general education classroom settings). This is absolutely essential for students whose very eligibility for the Alternate Portfolio Assessment is based in part on the criteria that: "the student, when instructed solely or primarily through school-based instruction, is unable to apply academic skills at a minimal competency level in natural settings" and "is unable to acquire, maintain, and generalize skills without intensive, frequent, and individualized community-based instruction" (704 KAR 3:303). School- or classroom-based instruction alone is insufficient.

- Students receive instruction in age-appropriate settings that provide **materials, accommodations, and instructional techniques, including assistive technology,** commensurate with the student's **chronological age** and that promote independence and self-determination. Elementary level programs for all students must always convey a respect for the student as an emerging young adult member of his/her community in accordance with the student's own preferences. To the extent possible, accommodations are nonintrusive, competence building, and in accordance with the student's own preferences.

- Instruction focuses on those **skills and supports** necessary for successful **transition to high school and then adult life** in the community. This requires coordinated transition planning across school and community agencies, and means that both skill development (e.g., job skills, mobility, money-management skills) and the creation of formal and informal supports (e.g., job coach assistance, mentoring from coworkers, transportation to work) are critical to successful post-school outcomes. Each of these issues must be addressed in the student's transition plan. Job exploration experiences should begin at the middle level.

In the next section of this document, we turn to the regulatory and policy basis for these Service Delivery Standards. In the Implementation Guidelines following this section, the specific application of the standards to elementary level programs for students with moderate and severe disabilities are addressed.

Policy Issues Related to Service Delivery Standards

The following provides a description of the relation of each of the Service Delivery Standards to existing regulatory or statutory requirements. It also includes examples of indicators that may serve as evidence of compliance with the regulation.

Service Delivery Standard I: *Self-Determination*

Regulatory Basis: 707 KAR 1:180. Section 6. Notice.

Section 6: If the purpose of a transition planning meeting is the consideration of transition services, the notice shall also indicate that the LEA will invite the child or youth.

All students with disabilities are to have a statement of transition services in their IEP beginning at age 14 that takes into account the youth's preferences and interests (IDEA 1997).

Indicators: Documentation of student instruction in self-advocacy to prepare them to take an active role in their transition planning and IEP meetings is provided.

Service Delivery Standard II: *The Family as a Full Partner*

Regulatory Basis: 707 KAR 1:180. Sections 6 Notice and 9 Representation.

Section 6. Notice. The LEA shall provide written notice to parents within LEA established time lines and procedures each time the LEA proposes or refuses to initiate, continue, or change the identification, evaluation, placement or provision of a free and appropriate public education.

Section 9. Representation. (1) The LEA shall assure that each child or youth is represented by a parent at all decision-making points in the identification, evaluation, and placement process and relative to a free appropriate public education.

Indicators: (Representation) There must be documentation that the district determined the student's representative no later than the point of referral.
(Notice) Notice shall be provided at the point of referral, initial evaluation, initial placement, continued, or change in placement and reevaluation.

Service Delivery Standard III: *Maximum Opportunities for Sustained Interactions with Nondisabled Peers*

Regulatory Basis: 707 KAR 1:220. Section 5. Participation with Children and Youth Who are Not Disabled

Section 5 (1) Each LEA shall ensure, to the maximum extent appropriate, that children and youth with disabilities, including children and youth in public or private institutions or other care facilities, are educated with children and youth who are not disabled.

(2) Each ARC shall ensure that the placement alternative and location determined for each child or youth with a disability:

(a) is chronologically age-appropriate; and

(b) provides an opportunity for interaction with children and youth who are not disabled.

Indicators: ARC conference summaries verify that when a student is served in separate settings it is supported by evidence of full consideration of Least Restrictive Environment.

Least Restrictive Environment: When an ARC committee is developing an IEP and determining the best place for those services to be provided, Kentucky Administrative Regulation (707 KAR 1:220) requires that, "Regular education classes in a regular school shall be the first alternative considered by an ARC for implementing the IEP of a specific child or youth with an educational disability." This is not to say all students with disabilities are to be served in regular classes as their primary placement, but it does require that the ARC document this as their first consideration. The regulation is equally clear in specifying that a rejection of services in the regular class cannot be based on such things as:

- the category of disability
- availability of services
- facility and equipment utilization
- reimbursement or transportation costs
- special design or unique attributes of a facility
- lack of or better qualified staff
- availability of related services
- smaller pupil teacher ratio
- administrative convenience
- parent preference
- configuration of service delivery

In the "Certificate Program Implementation Guide for Elementary Students" following this section, examples are provided of how students with moderate to severe disabilities can be appropriately accommodated in a general education setting. The ARC conference summary should document discussion of these types of adaptations in their consideration of services in the regular class. There are some students that still may not be served appropriately in regular class settings even with full examination of supports. It then becomes critical to determine what part of the student's day can be devoted to IEP implementation outside of a special education setting.

Service Delivery Standard IV: *Range of Curricular Options from the General Education Curriculum and Life Domain Areas*

Regulatory Basis: 704 KAR 3:303; 704 KAR 3:305; 707 KAR 1:200.

For a student with disabilities, the ARC develops a student's IEP targeting goals essential for reaching the learning goals and academic expectations. In addition, the ARC identifies specially

designed instruction including instructional strategies, supports, services, and accommodations needed by the student to be involved in and to progress in the general education curriculum, and to earn a diploma or a certificate of program completion. Planning an educational program for a student with disabilities requires careful planning and implementation by the ARC; alignment of the student's IEP with Kentucky's Learning Goals, Academic Expectations, and content and skills identified in the *Program of Studies*; and collaborative involvement of the general and special education teacher.

General education staff with certification in academic discipline areas and special education staff shall collaborate in the design and planning for the delivery of course content instruction within academic disciplines to assure alignment with Kentucky's Learning Goals, Academic Expectations, and content standards for each discipline. Each student's ARC or 504 committee shall address how and when this collaboration takes place to assure joint planning prior to and during implementation of a student IEP or 504 Plan.

Indicators : Documentation is provided in the ARC conference summary of the method by which general education staff collaborate with special education staff in the design and planning for how students will meet the Kentucky's Learning Goals and Academic Expectations. Documentation also should support how students are to be involved in and progress in the general education curriculum (IDEA, 1997).

Service Delivery Standard V: *Instruction within the context of real-life activities*

Regulatory Basis: 707 KAR 1:230. Section 8. (3)(a)2.

A youth shall be eligible for a certificate program completion if an ARC determines that the severity of the disability prevents the youth from acquiring, maintaining, generalizing skills, and demonstrating performance without intensive, frequent, and individualized community-based instruction. The youth requires extensive direct instruction in multiple settings for application and transfer of skills and is unable to apply or use academic skills at a minimal competency level in natural settings when instructed solely or primarily through school-based instruction.

Indicators: Documentation of frequent and systematic instruction in multiple school and non-school settings commensurate with the student's age and needs to be able to function successfully in their natural environments is provided.

Service Delivery Standard V: *Utilizing materials, accommodations, and instructional techniques commensurate with student age that promote independence and self-determination*

Regulatory Basis: 707 KAR 1:230. Section 4. Program Services and Resources

Section 4: Each LEA shall make available all instructional materials, supplies, textbooks, technology and equipment needed to implement the IEP of each child or youth with a disability. This includes instructional materials, supplies, and equipment which: (a) Facilitate attainment of student outcomes and IEP goals and objectives; and (b) Are appropriate for the chronological age of the child or youth.

Indicators: Documentation of adequate and appropriate materials and instructional techniques being available to implement the IEP is given. Documentation in the ARC conference summary of consideration of any need for assistive technology to implement the IEP (IDEA 1997) is provided.

Service Delivery Standard VII: *Skills and supports necessary for successful transition to adult life*

Regulatory Basis: 707 KAR 1:220. Section 10. Transition.

Section 10: The plan for transition shall address

(1) Projected post-school activities and long-range outcomes including:

(a) Adult status;

(b) Work (jobs and job training, including competitive, supported, sheltered, volunteer employment, work activity and the military);

(c) Postsecondary training and learning (continuing education, such as college, vocational technical school, literacy programs);

(d) Home living (independent living with or without support, group home living, living with parents or relatives, day habilitation, residential);

(e) Community participation (accessing community resources independently, with or without support, or through group participation. Community resources include banking, shopping, public transportation, medical or health services, governmental agencies and services, and voting); and

(f) Recreation and leisure activities (preferred free time activities with or without support).

Indicators: Documentation of a completed transition plan beginning at age 14 and annually thereafter, with a statement of transition services in the IEP is provided. The statement of transition services at age 14 must focus on the student's course of study and how it will help the child make a successful transition to his or her goals for life after secondary school. Agency linkages and responsibilities need to be specifically identified by the age of 16 in the transition plan.

Service Delivery Standard VIII: *Transdisciplinary Team Approach*

Regulatory Basis: 707 KAR 1:210. Section 4. Content of an IEP

Section 4: Related services shall:

1. Related directly to the specially designed instruction needed for the child or youth to achieve IEP objectives and directly affect acquisition of essential skills or information;
2. Be necessary for the child or youth to benefit from specially designed instruction;
3. Be described by the type and nature of each service; and
4. Not be needed solely for aesthetic or medical reasons.

Indicators: The IEP and or conference summary includes a description of specially designed instruction and related services that integrates therapeutic (e.g., OT/PT/SLP) services into the IEP in an education context. Planning is evident for how therapists will collaborate with teachers and other staff in implementation of therapy services across daily routines in an educational context.

Certificate Program Implementation Guide for Elementary Students

A program of studies for students with disabilities in the Alternate Portfolio Assessment system should incorporate eight service delivery standards. These standards are described in detail with illustrative examples throughout this section. This includes an explanation of the standard, other best practice exemplars, and a tool box. The tool box provides resource information for more in-depth study.

Service Delivery Standard I: *Self-Advocacy*
Students have opportunities for making choices and decisions and receiving instruction in self-advocacy.

Different transitions occur for young children as they enter the primary program and exit into middle school. It is essential that elementary instruction include information about what it means to have an educational disability and how many persons with disabilities have been highly successful in spite of their disability. In order to prepare the student for an increasing level of active participation in development of their IEP, instruction needs to be provided on the legal issues surrounding the provision of special education services. Students should understand the importance of asserting themselves when contributing to ARC decisions that have a profound impact on their current and future school services. The student, as early as age 13, should be prepared for participation in transition planning through classroom instruction. The actual development of the transition plan should occur for students at age 14 and their families, immediately prior to the transition from middle level to the high school setting.

Service Delivery Indicator:
Students transition from elementary level to high school at the same chronological age as their nondisabled peers.

It is not mandated that students have transition plans before age fourteen (14). However, many critical junctures occur for students during the elementary years (e.g., preschool to primary , primary to intermediate, to middle level). Transition plans help ensure students success by identifying needs and specifying services required to meet those needs. The process may include the child's family, friends, school personnel, and other service providers to assist in the development of action plans that deal with these early transitions.

Figure 1

Example 1- Keesha is a six-year-old who attended half-day entry level primary classes at her neighborhood elementary school. Near the end of the school year, Keesha's family planned a move to a new home within the boundaries of a different school. Her ARC convened to address her transition needs related to this change of school environments.

Example 2- Bryan is an 11-year-old fifth grader scheduled to attend his local middle school for the upcoming school year. In the spring, his ARC began meeting to plan transition activities essential for a smooth and successful transition to the middle school setting.

Transition Plans

Transition services are defined as a "coordinated set of activities for a student that are designed within an outcome oriented process which promotes movement from school to post-school activities" (IDEA, 1997). "Activities include postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. These transition services must be based upon student preferences or interests as well as individual needs" (IDEA, 1997).

A transition plan must be developed for each student beginning at age 14 and reviewed annually until the student exits school. A statement of transition services, developed at the age of 16, must be embedded into the IEP. This coordinated set of activities includes instruction, related services, community experiences, employment, post-school adult living, functional vocational evaluation and daily living skills. Each of these areas must be considered as a part of the statement of transition services; therefore, the transition plan must be developed prior to the IEP. The transition plan establishes a destination, and the IEP serves as the road map to reach the destination. Instructional practices as described earlier should however, begin when the student enters middle level and should begin to be closely linked to the IEP.

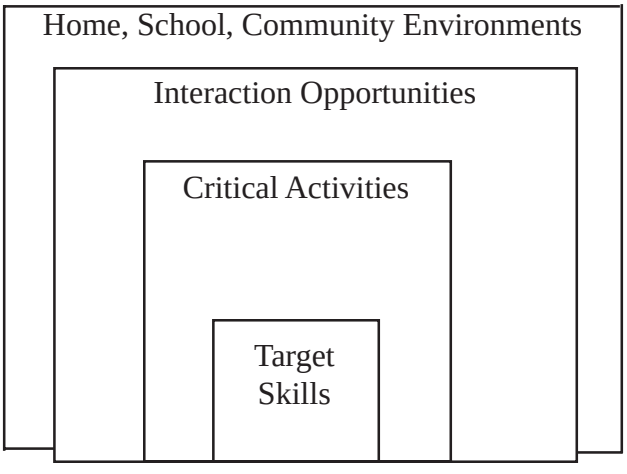
Service Delivery Indicator:
High quality instructional transition and service provision are reflected through integration with nondisabled peers, functional curriculum, job exploration opportunities, community based instruction, and parent/student/peer involvement.

Tool Box:
Kentucky Student Career/Transition Plan and Addendum for Students with Disabilities
Student Transition Survey, Parent Transition Survey
Planning for Life After High School: A Handbook for Information Resources for Families and Young Adults with Disabilities. Available from KY Transition Collaborative, Human Development Institute-UAP, University of Kentucky, Lexington, KY 40506-0051.

IEP Planning

The IEP forms the basis of the transition plan and is illustrated in Figure 2.

Figure 2: IEP Planning



As Figure 2 illustrates, the IEP should include specific learning targets that focus on basic skill needs in the following seven areas: Communication Functioning, Social Competence, Physical Functioning, Cognitive Functioning, Vocational, Academic, and Recreation/Leisure. It should also include targets that specifically prioritize critical activities (e.g., tasks that must be performed for the student if he/she cannot do them for himself/herself) and interaction activities with nondisabled peers. Skills should be practiced within the context of real-life activities that come from three domains of vocational, personal management (domestic), and recreation/leisure areas. Skills identified for the IEP should facilitate the student's ability to function in a variety of home, school, and community environments as well as address post-school outcomes (Hunt and Goetz, 1992). At the elementary level, the ARC must carefully determine how much traditional academic instruction is needed to increase students' future independence. Many academic skills will have some current functional application but some will not. The student's rate of progress may be considered when determining a balance between academic and functional skills.

Service Delivery Indicator:
The student's IEP reflects the basic skills, critical activities, and social interactions necessary for the student to demonstrate the skills in home, school, and community environments.

The sample IEP objective in Figure 3 includes the basic skills of managing a daily picture schedule and telling time for Mallory, an eight-year-old primary student. These skills will be embedded and practiced within the daily routine of her primary classroom. The most appropriate vocational setting at the primary level would be the primary classroom, having natural support from same-age peers. CBI is not appropriate at the primary level; however, many skills could be reinforced in the home setting. Curriculum related CBI is usually introduced during the fourth grade and provides learning opportunities for students with and without disabilities.

Figure 3: Sample IEP Objective for Mallory

Annual Goal: Mallory will improve vocational skills in the areas of managing a schedule and telling time.

Short Term Objective: By May of 2000, Mallory will use the picture cues on her schedule to anticipate and verbalize the next activity and self-initiate activities (e.g., getting her items or belongings needed for the next activity in classroom settings for four of five daily trials).

Mallory can practice schedule use and telling time within each of her daily activities in the primary classroom and at home. She can also work on social interaction skills simultaneously in these same settings. The IEP/Activity Matrix in Figure 4 shows the relationship between Mallory's IEP goals and her daily schedule.

Figure 4: IEP/Activity Matrix

Basic skills	Using Schedule	Telling Time	Reading Sight Words	Social Skills	Addition and Subtraction
Language Arts and Themes 8:00 - 9:00	X	X	X	X	
Math Centers 9:00 - 10:00	X	X	X	X	X
Science and Social Studies 10:00 - 11:00	X	X	X	X	
Lunch 11:00 - 11:20	X	X	X		X
Reading Centers 11:20 - 12:20	X	X	X	X	
Computer Lab 12:20 - 1:00	X	X	X		X
Recess 1:00 - 1:30	X	X			X
Special Classes (Art, Music, PE, Library) 1:30 - 2:15	X	X	X		X
DEAR (drop everything and read) 2:15 - 2:45	X	X			X
Clean up and class jobs 2:45 - 3:00	X	X	X		X

As Figure 4 illustrates, Mallory has multiple opportunities throughout the day to practice the basic skills on her IEP within the context of the general education curriculum. Specific opportunities for social interactions also are considered.

Tool Box:

Giangreco, M.F., C. G. Cloninger, and Iverson. *COACH: Choosing Outcomes and Accommodations for Children*. Baltimore: Paul H. Brookes Publishing Co., 1997.

Forest, M., and J. Pearpoint. *Common Sense Tools: MAPS and Circles.* Toronto: Inclusion Press, 1992.

O'Brien, J. *A Guide to Lifestyle Planning.* Baltimore: Paul H. Brookes Publishing Co., 1987.

Mount, B. *Making Futures Happen*. St. Paul Governor's Council on Developmental Disabilities, 1989.

Service Delivery Standard II: *The Family as a Full Partner*
Family is a full partner in the development of the transition plan and IEP.

Transitions during the elementary years for students with moderate and severe disabilities and their families are important ones. The elementary years serve as a major transition for all students moving from preschool to the elementary level and from the elementary into middle level. Families are critical participants in this effort as well. The following strategies will encourage active family involvement throughout the student's elementary level experience (York and Vandercook, 1992):

- Families are invited to participate in the preplanning stages of the transition plan and IEP, prior to the final IEP conference. Using family focused interviews or person-centered approaches (e.g., MAPS, Personal Futures Planning, COACH) invite family participation.

- Family-centered practices are incorporated across the age-span. Student needs can be met more efficiently and effectively if family priorities are addressed. At the high school level, families may need assistance in defining their roles as parents of a teenager or young adult.

- Family support services should be flexible, individualized, and designed to meet the diverse needs of families. Families are more likely to utilize services and supports if they are flexible and based on family priorities. Families of students entering high school may need information and support in accessing adult services (e.g., Medicaid, SSI, Supported Living).

- Language is changed to support family-centered principles (e.g., using "family" instead of "parents", "priorities and concerns" instead of "strengths and needs"). Use of terminology like "strengths and needs" assumes that the service provider (teacher in this case) can judge a family's strengths. On the other hand, a focus on family priorities puts the student and family in the lead role. It increases the likelihood that the family will utilize the services and supports.

- Families are provided with the opportunities to express satisfaction/dissatisfaction with the process.

The examples in Figure 5 shows how family-centered services can be provided at the elementary level.

Figure 5: Family-Centered Service

Example 1- Keesha's family was planning a move to a new home within the boundaries of a different elementary school . In the early spring, Keesha's ARC, including her parents, grandparents and receiving school principal, met to discuss transition priorities and concerns. It was decided that the first priority was to identify the receiving teacher and related-service personnel. Opportunities are provided for those people and Keesha's family to observe Keesha in her current program. During May, the ARC met again, along with the previously identified personnel, to finalize her transition plans. It was decided that Keesha would attend an Early Start Program provided at her new school for incoming primary students that would be taught by her primary teacher. Since Keesha needed to negotiate stairs at her new school, a physical therapist would direct and provide consultative services during the Early Start Program. Her grandparents would follow-up with instruction at their home, since Keesha usually spends weekends with them. Her parents would provide the school with the names of neighborhood children whom Keesha met over the summer, so that she could be placed in the same class with some of them.

Example 2- Bryan was scheduled to attend his local middle level school the upcoming school year. At the Spring ARC meeting, it was decided that he would participate with the rest of his fifth-grade class in presentations at his elementary school and orientations at the middle level school. His mother would observe Bryan in his fifth-grade class. After these activities, another ARC would take place to finalize transition services. This ARC also would include three of Bryan's friends. It was decided that Bryan would go to the middle level school for two hours per day for one week prior to the beginning of school. His sending and receiving special education teachers will work with Bryan, acclimating him to the new environment. Because Bryan's family had a swimming pool, Bryan's mother and the receiving school staff decided to enroll Bryan in four quarters of physical education instead of the two quarters required of other students. Bryan's friends pledged to locate their lockers near his and to help him transition from class to class.

Tool Box:
Farmer, B., and M. Wilson. *Family Resource Youth Service Center Guide, KY Systems Change Project*, Lexington: University of Kentucky Human Development Institute, 1995.

Service Delivery Standard III: *Transdisciplinary Team Approach*
Needed related services (speech/language therapy, physical or occupational therapy, rehabilitation counseling, therapeutic recreation) are provided through a transdisciplinary team approach.

Physical therapy, occupational therapy, and speech/language therapy are related services that are necessary for students with disabilities to benefit from their educational program. These services must be educationally relevant (i.e., the appropriateness and the extent of services must be related to the educational needs rather than medical needs of students with disabling conditions) (KDE, 1995). These services are most appropriately provided in the least restrictive environment with an emphasis on collaborative teaming models and a variety of instructional strategies.

A transdisciplinary approach involves a team commitment to teaching, learning, and working with others across traditional discipline boundaries to better serve individuals with disabilities (Rainforth, York, and McDonald, 1992). Caitlyn is a student requiring this type of team approach. The example in Figure 6 illustrates integrated related services.

Figure 6: Caitlyn and Related Services

Caitlyn is a 10-year-old fourth grader with significant disabilities. She uses a wheelchair and communicates via eyegaze and smile or head nod for "yes." At the beginning of her fourth- grade school year, Caitlyn's ARC met to discuss the limitations of her present mode of communication and more preferable options that might be available to her. Her fourth grade teacher felt the present system was too time consuming and only gave her the ability to choose between messages someone else had decided for her. An augmentative communication system seemed a logical direction. The physical therapist stated that the most reliable motor response for Caitlyn was head control. The occupational and speech therapists knew that she had developed good control over opening her mouth. Her mother's only requirement was that whatever system was chosen, needed to be easily removed from and reattached to her wheelchair. The special education teacher took Caitlyn, her best friend, her mother, and related service information to the Kentucky Educational Technology Services, where they experimented with several systems. They decided on three promising systems and tried them for an extended period. The OT, PT, ST and special education teacher worked with Caitlyn, teaching her how to access each system and experimenting with different wheelchair positions. In the fourth-grade classroom, the special and regular education teachers worked with Caitlyn on using the system and deciding what messages she would need to convey. After one system proved to be the best option, concentrated work began on teaching Caitlyn to use it exclusively. The PT worked with her in gym class to improve her head control. Additionally the OT and ST worked with Caitlyn's oral motor control at lunch. Collaboration between all the therapists and the special education teacher occurred at all times. The ST received input from Caitlyn's mother, teacher, and friends on what messages were priorities at home, school, and during free time. As messages need to be changed, these are coordinated services through the special education teacher who serves as a case manager.

Rainforth et al. (1992) suggest the following checklist (see Table 1) for determining the educational relevance of services provided to students with moderate and severe disabilities in educational settings.

Table 1: Checklist for Discussion of Educational Relevance (Rainforth et al., 1992, p. 33.)

____ The need for collaboration with related services is determined by that persons' contribution to student achievement of priority educational goals.
____ Related services personnel assess student capabilities in the context of the educational program, including typical school, home, community environments, routines, and activities determined to be priorities for each student.
____ Related services personnel work directly with students within the context of the educational program.
____ Related services personnel work with teachers and other team members to identify motor and communication priorities within the educational program.
____ Objectives related to improving motor and communication abilities are embedded throughout the IEP, as opposed to being separate components.
____ Related service personnel and teachers work together to design instructional methods for teaching students to participate with a greater degree of success.
____ Therapists teach each other to use the instructional methods they have found effective in facilitating improved motor, communication, or other competencies.
____ Related services personnel work on an ongoing basis with students and other team members to evaluate student progress in educational activities.

Tool Box:
Kentucky Department of Education . *Guidelines for the Delivery of Occupational and Physical Therapy Services in Educational Settings*. Frankfort, KY: Author, 1995.

Smith, P. *Integrating Related Services. KY Systems Change Project,* Lexington: University of Kentucky Human Development Institute, 1992.

Rainforth, B. , J. York, and C. Macdonald, *Collaborative Teams for Students with Severe Disabilities.* Baltimore: Paul H. Brookes Publishing Co., 1992.

Service Delivery Standard IV: *Assessment in Natural Settings*
Targeted skills from the student's IEP should be embedded into real-life activities with natural performance demands. These can occur in general education classes or the community.

Assessing a student's current level of performance can be accomplished with a variety of assessment strategies. Performance-based and authentic assessment procedures produce the most valuable information for developing instructional programs. Functional assessment, also known as ecological assessment, considers the real-life demands of a particular task or objective (Falvey, Brown, Lyon, Baumgart, and Shroeder, 1980; Gaylord-Ross and Browder, 1991; McDonnell, Wilcox, and Hardman, 1991). The team observes the student in numerous settings over a period of days or weeks to determine the student's learning style. Gaylord-Ross and Browder (1991) outline functional assessments that

- focuses on practical independent living skills that enable the person to survive and succeed in the real world,
- has an ecological emphasis that looks at individual functioning in the student's current and future environments,
- examines the process of learning and performance,
- suggests teaching techniques that may be successful, and
- specifies ongoing monitoring procedures that can evaluate progress.

Similarly, McDonnell, Wilcox, and Hardman (1991) suggest

> "Skills are **never** taught in isolation from actual performance demands. Additionally, the individual does not **'get ready'** to participate in the community through a sequence of readiness stages as in the developmental model, but learns and uses skills in the setting where the behavior is expected to occur (p.23)."

Ecological inventories are surveys or observations that are used to identify skills within current and future settings in which the student functions (Brown et al., 1979). The steps for conducting an ecological inventory include

- dividing the curriculum into subjects,
- delineating the environments that are available to peers without disabilities,
- delineating the subenvironments within each environment,
- delineating the activities within each subenvironment, and
- delineating the specific skills expected or required in order to participate in each activity.

Figure 7: **Ecological Inventory for the School Cafeteria**

Curriculum Domain:	Personal Management
Environment:	School Cafeteria
Sub-environment:	Food Bar
Activity:	*Locating End of Food Bar Line*
Skills:	Enter the cafeteria door
	Scan for the end of the line
	Go to the end of the line
Activity:	*Purchase Lunch*
Skills:	Pick up tray
	Select drink, silverware and napkin
	Put drink, silverware and napkin on tray
	Scan food selections
	Put food selections on tray
	Carry tray in line to cashier
	Select correct change
	Pay cashier
	Carry tray to table

Once the ecological inventory has been completed, a student repertoire inventory is the next step. A student repertoire inventory measures a student's existing performance against the skills identified in the ecological inventory as performed by peers without disabilities (Falvey, Brown, Baumgart, and Schroeder, 1980). A student repertoire inventory has four steps including

1) Delineating the skills performed by peers without disabilities for a given activity (step 5 of the ecological inventory).
2) Observe and record the student's performance in these skill areas.
3) Conduct a discrepancy analysis of the student's performance against the performance of peers without disabilities.
4) If the student is unable to perform any of the skills, use one of the following options:
    - teach the student the skill,
    - develop an adaptation and teach the student to use it, and
    - teach the student to perform a different or related skill.

Figure 8 illustrates a student repertoire for Mallory.

Figure 8: Student Repertoire Inventory

Name: Mallory
Curriculum Domain: Personal Management
Environment: School Cafeteria
Subenvironment: Food Bar Line
Activities: Locate end of food bar line
Purchase lunch

Date	Inventory for Student without Disabilities	Inventory	Discrepancy Analysis	Adaptation Hypothesis	What to do
6/99	1) Locate the cafeteria	–	May get lost on the way	Go with lunch buddy	Identify lunch buddy on schedule
	a) Enter the door	+			
	b) Scan for the end of the food bar line	+			
	c) Go to the end of line	–	Can not determine end of line	Stay with lunch buddy	Reinforce concepts beginning and end
	2) Purchase Lunch				
	a) Pick up tray	+			
	b) Select drink	+			
	c) Put drink on tray	+			
	d) Select silverware	+			
	e) Put silverware on tray	+			
	f) Select napkin	+			
	g) Put napkin	+			
	h) Slide tray along food bar	–	Slides tray off in floor	Pick tray up	Teach picking tray up to move it
	i) Scan food selections	+			
	j) Put food selections on tray	+			
	k) Move in line to cashier	+			
	l) Select correct change	+			
	m) Pay cashier	–	Gives all change to cashier	Pay in bills	Teach next dollar strategy
	n) Carry tray to table	+			

Scoring Key: (+) = Correct Response (-) = Incorrect Response

This student repertoire inventory indicates the skills that Mallory needs to learn in order to purchase her lunch in the school cafeteria. Mallory needs to be taught how to locate the cafeteria. She will choose a classmate each week to be her lunch buddy and ask them to write their name on her schedule. She has difficulty determining the end of the food bar line so she will stay with her buddy to make sure she gets in line correctly. The concepts of beginning and end will be reviewed in class. An adaptation to simplify the task of paying will be to teach her the next dollar strategy. To make sure she sits in her designated area, her buddy will wait until she pays and walk with her to the table.

Ecological inventories may also be used to assess the student's participation in general education classroom activities as well. The example in the following figure illustrates an ecological inventory/ classroom activity analysis for an elementary student.

Figure 9: Classroom Activity Analysis

Student: Mallory

Activities		Expected Responses	Discrepancies	Possible Adaptations
Steps	Cues			
Follow schedule	verbal prompt	prepare items for next class	can't read	use picture cues next class
Math center Groups	classmate direction	solve math problems	couldn't calculate answer	use calculator
Reading	teacher direction	read orally	didn't know all words	choose sentence in advance

Tool Box:

Ford, A., R. Schnoor, L., Meyer, L. Davern, J. Black, and P. Dempsey. *The Syracuse Community Referenced Curriculum Guide*. Baltimore: Paul H. Brookes Publishing Co., 1989.

Wilcox B. , and G.T. Belamy, *The Activities Catalog: An Alternative Curriculum for Children and Youth with Severe Disabilities.* Baltimore: Paul H. Brookes Publishing Co., 1987.

Falvey, M. *Inclusive and Heterogeneous Schooling.* Baltimore: Paul H. Bookes Publishing Co., 1995.

Special Delivery Standard V: *Friendships and Social Relationships*
Students should have maximum opportunities for positive, sustained interactions with nondisabled peers, with the goal of developing mutual friendships.

Friendships provide the context for displaying a variety of social skills (Falvey, 1995). A smile, laugh, or touch displays a positive interaction style. Communication skills are emphasized using verbal and non-verbal responses. Friendships are reinforcing and provide a natural context for increasing appropriate social skills. Listening, sharing belongings and feelings, sharing likes and dislikes, trustworthiness, and loyalty are all practiced within the context of naturally occurring friendships. Other social skills that may be impacted by friendships include appropriate dress, grooming, touching, voice level, discriminating between strangers and acquaintances, rights, and privacy (Falvey, 1995). The concept of natural supports is based on the understanding that relying on typical people and environments enhances the potential for inclusion more effectively than specialized services and personnel (Nisbet, 1992).

Caitlyn (see figure 6) has many opportunities to develop friendships with nondisabled peers. She attends her neighborhood elementary school and is in regular fourth-grade classes all day. Because she rides a bus with a wheelchair lift, friends meet her at the entrance to school each morning and take her to class.

In class, she listens to the same lessons and her work is adapted either by her classmates or a teaching assistant. Multiple choice questions regarding the same material are prepared by her teacher. When her friends finish their papers, they ask Caitlyn each question orally. They write down the question answers on a wipe-off board and Catilyn signals her choice by eye gaze. During midmorning break, her friends ask her lunch preferences which they then write down and take to the cafeteria so her food can be blended prior to lunch period. During cooperative groups, Caitlyn is either assigned to a group by her teacher or chosen by classmates. Adaptations are sometimes made by the special education teacher but, usually, her friends decide her group responsibilities and performances since they know her well.

Caitlyn is fed by either the OT, ST, special education teacher, or a teaching assistant. She usually doesn't eat much because when she finishes her lunch, the adult leaves so Caitlyn and her friends can socialize more freely and discuss important issues (like boys).

Two days a week Caitlyn's mother works late so Caitlyn attends the after-school program. When her mother gets off work, she picks up Caitlyn and two other neighborhood children and takes them home. Every other Friday, a friend gets a bus pass and rides the lift bus home to spend the night with Caitlyn.

As Falvey (1995) points out, friendships are highly complex and unique and do not lend themselves to task analysis or traditional instructional approaches. Falvey et al. (1980) recommended three instructional approaches to facilitate the development of appropriate behaviors that lead to friendships by both students with and without disabilities. These three instructional approaches are shaping, modeling, and coaching.

Shaping – Shaping is the systematic reinforcement of a desired behavior. The desired behavior is initiating a social interaction. The teacher or the peer will reinforce the student for moving toward the other person. Gradually, more complex behaviors are required in order to receive the reinforcement.

Modeling – Modeling refers to demonstrating a behavior for the student to imitate. Teachers or peers can serve as models for appropriate social behaviors.

Coaching – Coaching is a good way to practice social skills in a safe environment. Coaching involves direct instruction, opportunities to practice, and a review session following the interaction (Falvey, 1995).

Tool Box:
Forest, M., and J. Pearpoint. *Circle of Friends Activity.* Toronto: Inclusion Press, 1992.

M. Falvey . "Developing and Fostering Friendships." *Inclusive and Heterogeneous Schooling*. Baltimore: Paul H. Brookes Publishing, 1995.

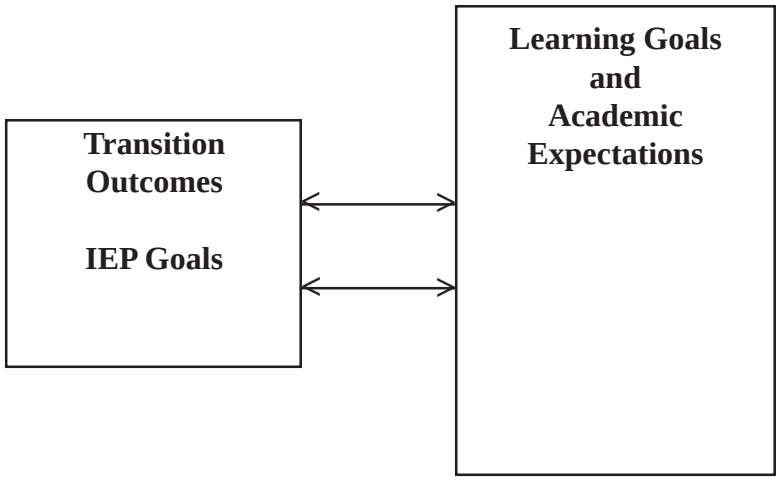
Kleinert, H. K. *Kentucky Classrooms: Everyone's Welcome.* Lexington: University of Kentucky Human Development Institute, 1997.

Service Delivery Standard VI: *Curricular Options*
A student's program should include a range of curricular options in the general education curriculum and life domain areas.

Service Delivery Standard VII: *Transition Planning*
Instruction should focus on those skills and supports necessary for successful transition to adult life in the community.

Curricula for students in the Alternate Portfolio Assessment have traditionally come from the identification of activities from three life domain areas: vocational, recreation-leisure, and personal management. However, the Kentucky Education Reform Act (1990) mandates that all students are required to evidence Kentucky's Academic Expectations. While students with disabilities in the alternate portfolio are not required to demonstrate the academic expectations with the same performance indicators, **they are required to evidence the academic expectations**. In addition, recognition that students with disabilities in the alternate portfolio may have special interests or abilities in a variety of subject areas has resulted in encouraging these students to develop those interests and abilities. The Alternate Portfolio Assessment includes 28 of the academic expectations for all Kentucky students. Designation of alternate portfolio eligibility does not limit the student's participation in any general education curriculum course. Supports must be provided so that the student may participate successfully in the general curriculum. In fact, it would be rare that an academic outcome could not be evidenced in an elementary school setting. If it could not, two questions should be asked: 1) Is the skill functional? and 2) Is the skill age appropriate? Figure10 illustrates the relationship between transition and IEP goals and objectives to the curriculum and academic expectations.

Figure 10: **Relationship of Transition and IEP Outcomes to Academic Expectations**



At the elementary level, most (if not all) IEP goals and objectives can be addressed. For example, Brent is a fourth grader who is learning money-counting skills, specifically coin identification and next dollar strategy. All students in the fourth grade are working on money-counting skills though they may be at different levels (e.g., doing word problems, making change, estimating, budgeting, figuring tax, deciding on best buys) While classmates work on evidencing those performance indicators, Brent uses the same problems but works on the two IEP objectives that have been prioritized for him. He uses real money and works in a small group with peers who provide him the necessary supports. He can apply those skills throughout the school year on a daily basis at the bookstore and in the cafeteria. While on regularly scheduled field trips with his fourth-grade class, he can use his skills to buy snacks at the theater and buy souvenirs from the art museum. While studying Mexico in social studies, Brent's cooperative group was assigned the task of making tacos for the class. The special education teacher arranged for a bus to take Brent and four other group members to the supermarket. Before going, two students figured how much money, including tax, they would need to take. Once at the store, Brent's job was to pay for the supplies using next dollar strategy and count to determine if the change was correct. From this example, it is clear that elementary school settings can and do provide many opportunities for students to learn, practice, and apply academic and real-life skills.

On rare instances, an elementary student may need more intense instruction outside of school settings. Usually, these instances are identified and prioritized by the student's family. For example, Keesha (the primary student in example 1) would not stay with her mother at the mall. She would often bolt away and run within the open spaces of the courtyard. The regular and special education teachers and Keesha's classmates worked with her on staying in line and walking in hallways. In her physical education classes, the teacher tried to play a daily partner game to teach Keesha to stay with another person. Although Keesha was successful in school settings, the desired behavior did not transfer to the mall. The special education teacher set up weekly outings to the mall to work with Keesha. Her mother was present to observe her progress. On several of these occasions, other students accompanied Keesha to buy fish for the classroom aquarium or take photos of "things you can buy with the letter__." After four training sessions, Keesha's mother joined Keesha and her teacher in walking through the mall.

The teacher still maintained the responsibility for Keesha. After two more sessions, the three met again at the mall where Keesha's mother took over the responsibility. After three successful outings with her mother, the scheduled CBI was discontinued and Keesha's mother maintained Keesha's behavior successfully on a more natural schedule. Keesha went back to full time instruction in her regular primary classroom.

At the elementary level, instruction should occur primarily within the general education classroom. It would be a rare instance when all academic expectations could not be evidenced in settings occurring in the general education curriculum. CBI should be tied directly to the general education curriculum and provide learning opportunities for students in regular and special education programs.

Service Delivery Indicator:
Students in elementary school should spend a ***maximum of 4 hours*** *per month in community-based instruction. This instruction should focus on applying skills learned in the regular education curriculum and be directly linked to activities occurring in the classroom.*

Tool Box:
Dyer, L., and J. Kearns. *TASKS: Teaching All Students in Kentucky's Classrooms.* Lexington: University of Kentucky Human Development Institute, 1998.

Service Delivery Standard VIII: *Instruction*
The student's program should provide materials, accommodations, instructional techniques, including assistive technology that are commensurate with the student's chronological age.

While students with disabilities are expected to evidence the academic expectations, how they accomplish this is of primary importance. Falvey (1995) suggests that systematic and organized learning experiences are essential to learning in any curriculum. Students learn best when the following conditions are met

- safe learning environment,
- students are actively involved and engaged,
- students are teaching each other,
- students are learning through their preferred modality,
- students are learning at an appropriate rate, and
- goals are individualized.

Service Delivery Indicator:
Individualized instruction, collaborative teaching, motivation, choices, and appropriate selection of reinforcement are all employed that contribute to enhanced student performance.

Individualized instruction here refers to specific lesson accommodation and not necessarily one-to-one instruction. Lessons should hinge together from one day to the next so that the student can understand and use the learning, as well as apply learning to real-life situations. Lesson activities and materials must be age appropriate and take place in natural-learning environments. Students should be taught to make choices within the context of all instructional activities. The example for Brent in the previous section illustrates how Brent's program includes variety of contexts for instruction. Instruction takes place in a variety of natural environments and is activity-based. He applies his money counting skills across school and curriculum related community-based settings. In math, he uses computer-assisted instruction. In science, he works in a cooperative-learning experiment group. A whole language approach is being used to develop reading skills in reading class. Brent also works with his classmates to complete

classroom jobs such as watering the plants, passing out papers, cleaning the chalkboard, delivering attendance reports to the office etc. Once the context for instructional activities has been designed, Brent's teachers will then need to make some decisions regarding appropriate instructional approaches. They should consider the following questions in Figure 11.

Figure 11: Making Instructional Decisions

1) What are the learning strengths of the student? How does he/she learn best? Brent responds well to verbal directions and modeling. Visual models are particularly helpful. Modeling is needed for complex motor skills. He responds well to coaching for social interactions.
3) What is the type of skill? 4) Can the student perform the skill with the same instruction as other students? 5) Will adaptations facilitate learning? What types? 6) Who will need to be involved in teaching the skill? 7) Which type of instruction is least stigmatizing? 8) Which type of instruction promotes self-determination and choice? 9) Which type of instruction is least intrusive, yet still effective and efficient? 10) Which type of instruction will fit best into the general education classes and community?

Brent may need some specialized instruction within these instructional contexts. As the decision-making process indicates, a least-to-most intrusive instructional hierarchy should be considered. The following chart considers these questions as they relate to instructional activities. The work sheet in figure 12 is an analysis of each instructional activity in Brent's day. It includes activities, student objectives, instructional strategies, possible accommodations, and necessary supports.

Figure 12: Classroom Activity Analysis Work sheet
Student: Brent

Activity	Student Objectives	Instructional Strategies	Adaptations	Support
Math Class	Improve money skills	Verbal and model	Next dollar strategy, computer program	Cooperative learning
Science Lab	Working in a group organizing materials	Verbal and model	Picture cards of experiment steps, picture checklists	Cooperative learning
Using a schedule	Prepare belongings, telling time	Verbal and model	Picture cues paried with words	Classmate
Reading	Improve reading skills	Time delay, books on tape, modeling, select material in advance to practice	Use whole language approach	Classmate

In addition to determining instructional strategies, on-going progress data should be collected on a twice-weekly basis. The following data collection sheet provides a multipurpose data collection tool using an embedded basic skill approach.

Figure 13: Data Collection Tool

Objective	Task Request	Data					Total
Activate switch	Blender						
	Slide projector						
	Hot air popcorn						
Grasp and hold	Attendance sheets						
	Meal cards						
Recording Key:	(+) = Correct (-) = Incorrect FP = Full Physical PP = Partial Physical M = Model I = Independent						

Actual instruction for the student should follow a systematic process. Systematic instructional procedures insure consistent, near errorless learning that is necessary for students with severe disabilities to acquire and demonstrate performance.

A sample instructional program design can be found on the following page. Systematic instructional programs begin with preparing the student for instruction. For CBI, the planning can be as important as the lesson itself. In this part of the lesson, the student uses his or her individual student schedule to identify the next activity for the day.

Keri, a student with severe disabilities in a fifth-grade class, receives a verbal prompt by the teacher to check her schedule. The next picture on her schedule is shopping. Keri and three classmates from her geography cooperative-learning group are working on a rainforest presentation. They will be doing this CBI to purchase items made from products of the rainforest. Each student will be responsible for locating and purchasing an item within their budget. Keri should get the materials for shopping: a picture list of three items that her group must research, her grocery shopping budget envelope, her purse, and her jacket. The budget envelope contains $1.00 bills and was completed in an earlier activity. Next, the teacher will review the learning target with Keri. The teacher uses the progress chart from last time, where Keri had made a purchase at the school bookstore. For this lesson, Keri is working only on matching the items on her list. Last time, Keri found two of the three items, this time she is working to find all three items. Keri and the teacher review the items she must find using the pictures on her list.

At the store, Keri and her classmates scan the aisles for the items on their lists. Keri's partner determines the prompts she needs to locate the items and records the prompts on the data sheet. Once all the items are found, they proceed to the checkout counter. Keri independently uses her envelope to pay the cashier.

Upon returning to school, the teacher reviews the lesson with Keri and classmates . This time Keri found all the items independently. They fill in the progress graph and the lesson review sheet. Keri uses a stamp to answer the questions on the lesson review sheet. She adds these review sheets and

chart to her working portfolio folder. This folder also includes all of the pictures that Keri uses in her schedule and the product items she has purchased . Keri has a portfolio folder for each of the basic skills she is working on this year.

Tool Box:

Kentucky Department of Education *Transformations: Kentucky's Curriculum Framework.* Frankfort, KY: Author, 1995.

Dyer, L., and J. F. Kearns. *TASKS: Teaching All Students in Kentucky Schools.* Lexington: University of Kentucky Human Development Institute, 1998.

Sample Instructional Program Design

Environment: Foodtown
Activity: Grocery Shopping
Student: Keri
Teacher: Jacqui
Dates:
Transportation: School Bus
Materials: Budgeting Notebook, Picture Cards
Procedures: Preparing and Planning the Shopping Trip

1) Keri checks her picture schedule, she finds a picture of Foodtown.
2) Wait 10 seconds to see if Keri initiates getting the materials for her shopping trip.
3) If yes, then praise. If no, then provide verbal reminder and point to planning sheet, "What do you need for shopping?" The planning sheet has pictures of grocery list, money envelope, and jacket.
4) Review progress chart from last time. Keri will find three items by herself this time, matching the picture to the item.

Locating the items

1) Keri will get a shopping cart, put her purse in the seat, and get her list.
2) Keri will scan the list and scan the aisle.
3) Keri will locate item and place it in the basket.
4) Proceed to the next aisle.
5) Signal finished when all items are found.

A system of least prompts instructional procedure will be used. The teacher will wait five to seven seconds for Keri to initiate the step. If she does not initiate within five to seven seconds, the teacher will provide a verbal prompt and wait five seconds before providing the next level of prompt.

Objective	Task Request	Data					Total
Scan aisle, list	Item #1						
	Item #2						
	Item #3						
Organize materials Sign Finished	Shopping cart Finished						
Recording Key:	(+) = Correct (-) = Incorrect FP = Full Physical PP = Partial Physical M = Model V = Verbal I = Independent						

Ending the Lesson

1) Put away materials.
2) Review the data card and the lesson asking these questions.
   - You found _____ items at the store.
   - Next time you need to work on _____.
3) Color in chart for number correct.

References

Brown, L., M. Branston, S. Hamre-Nietupski, I. Pumpian, N. Certo, and L. Gruenwald. "A Strategy for Developing Chronologically Age Appropriate and Functional Curricular Content for Severely Handicapped Adolescents and Young Adults." *Journal of Special Education* 13(1) (1979): 81-90.

Dyer, L., and J. F. Kearns. *TASKS: Teaching All Students in KY Schools.* Lexington: University of Kentucky, Human Development Institute, 1998.

Falvey, M. *Inclusive and Heterogeneous Schooling: Assessment, Curriculum and Instruction*. Baltimore: Paul H. Brookes Publishing Co., 1995.

Falvey, M., L. Brown, S. Lyon, D. Baumgart, and J. Schroeder. "Strategies for Using Cues and Correction Procedures." In *Methods of Instruction for Severely Handicapped Students*. Eds. W. Sailor, B. Wilcox, and L. Brown. Baltimore: Paul H. Brookes Publishing Co., 1980. 109-133.

Forest, M., and J. Pearpoint. "Commonsense Tools: MAPS and Circles." In *The Inclusion Papers: Strategies to Make Inclusion Work*. Eds. J. Pearpoint, M. Forest, and J. Snow. Toronto: Inclusion Press, 1992.

Giangreco, M.F., C. G. Cloninger, and Iverson. *COACH: Choosing Outcomes and Accommodations for Children.* Baltimore: Paul H. Brookes Publishing Co., 1997.

Gaylord-Ross, R., and D. Browder. "Functional Assessment: Dynamic and Domain Properties." In *Critical Issues in the Lives of Persons with Severe Disabilities*. Eds. L.H. Meyer, C.A. Peck, and L. Brown. Baltimore: Paul H. Brookes Publishing, Co., 1991. 45-66.

Jorgensen, C. *Restructuring High Schools for All Students*. Baltimore: Paul H. Brookes Publishing Co., 1998.

Individuals with Disabilities Education Act (IDEA) Amendments of 1997.

Kentucky Department of Education. *Transformations: Kentucky's Curriculum Framework, Vols. 1 and 2*. Frankfort, KY: Author, 1995.

Kentucky Department of Education. *Guidelines for the Delivery of Occupation and Physical Therapy Services in Educational Settings.* Frankfort, KY: Author, 1995.

Kleinert, H. K. *KY Classrooms: Everyone's Welcome.* Lexington: University of Kentucky Human Development Institute, 1997.

Kleinert, H., S. Guiltinan, J. Farmer-Kearns, and A. Longwill. *High School Peer Tutoring Manual*. Lexington: University of Kentucky Human Development Institute, 1996.

Mount, B. *Making Futures Happen: A manual for Facilitators of Personal Futures Planning.* St. Paul: Governor's Council on Developmental Disabilities, 1989.

McDonnell, J., M. Hardman, A. McDonnell, and R. Kiefer-O'Donnell. *An Introduction to Persons with Severe Disabilities*. Boston: Allyn & Bacon, 1995.

McDonnell, J., B. Wilcox, and M. Hardman. *Secondary Programs for Students with Developmental Disabilities*. Boston: Allyn & Bacon, 1991.

Nisbet, J. *Natural Supports in School, At Work and In the Community for People With Severe Disabilities*. Baltimore: Paul H. Brookes Publishing Co.,, 1992.

O'Brien, J. "A Guide to Lifestyle Planning." In *A Comprehensive Guide to the Activities Catalog*. Eds. B. Wilcox and T. Bellamy. Baltimore: Paul H. Brookes Publishing Co., 1987.

Rainforth, B., J. York, and C. Macdonald. *Collaborative Teams for Students with Severe Disabilities.* Baltimore: Paul H. Brookes Publishing Co., 1992.

Smith, P. *Integrating Related Services: KY Systems Change Project.* Lexington: University of Kentucky Human Development Institute, 1992.

York, J., and T. Vandercook. *Systems Change From Collaborative Planning. What's Working: Minnesota Inclusive Education Technical Assistance Program*. Minneapolis: Institute on Community Integration, University of Minnesota, 1992.

Counselor's Roles with Exceptional Children

The school counselor's role with exceptional children is to assist learners and school staff with reducing educational, physical, and mental health barriers to learning. Counselors can

- provide individual and group counseling sessions to improve social competencies in the school and community settings.
- assist the school staff in structuring a service delivery system.
- support the collaborative efforts as defined in students' Individual Education Programs (IEP), 504 Plans, Individual Transition Plans, and Gifted Education programs and opportunities.
- provide support and curriculum alternatives to parents/students.
- assist students with connecting activities which provide a smooth transition from school to work.

Designing Your Own Classes or Unit Frameworks

This section is for those who have already identified a need to prepare a class or unit frameworks for students. That need focuses on offering specific content to a particular group of students. This section of the manual helps identify factors to be considered as curriculum and instruction is planned.

Designing a class or unit framework begins with answering a basic question:

What do I want my students to know and be able to do when they complete this class or unit?

Focusing on class or unit goals determines what content will be presented and how the classes or units will be structured. Begin with the easiest part of the question: characterize the intended student audience.

- For what grade level will the content be appropriate?
- What are the students' particular skills or interests? Are they at the introductory level or at a more advanced level?
- What is the best approach for these students? Will the best design be traditional, thematic, interdisciplinary, applied, integrated, or functional? For example, two courses may offer identical content and yet provide entirely different ways of presenting material. A health and fitness course, for instance, could be taught as theories of healthy living or as activity-based program designed to improve students' general health.

The next step is to determine specific content from the *Program of Studies* that will be taught. The next step will be to identify instructional methods and any additional content you wish to add also must be identified.

<u>Identifying Content</u>

Begin your search for content by examining all available standards. National standards may exist for your content area. National standards vary greatly in their specificity, but they all provide guidelines about key concepts in academic areas.

1) As you design the model, return to the idea of what type of class or unit you want to present. Is this a hands-on approach? Will it be inquiry based? Creating an overview statement that describes the conceptual background of the course will help you define your **instructional approach**.

2) Next develop **guiding questions** for the class or unit. These four to eight questions are the broad goals or organizers for students during the course They should not be able to be answered with a yes or no or even with a simple set of facts. Guiding questions should be written in student friendly language and relate to students' interests. They should often use the word, I. Since they guide the exploration and learning of students, very often they are phrased as "How can I…" For example, "How can I take real-world problems and solve them systematically?" "How can I use the inquiry process to help me learn about my world and share what I learn with others?" Although writing guiding questions is not an easy task, it is a critical one. Because these questions direct the instruction for the class or unit, they must be clearly stated and appropriate for both the goals and the content for the class or unit.

3) Once you have completed the guiding questions, you will design **activities** to help students answer those questions. Activities should

- be broad enough to cover more than a day's instruction;
- relate to guiding questions;
- connect directly to specified content;
- tie to academic expectation(s);
- be "active" or have students actively participate in learning;
- answer "why" students are doing this activity;
- include products (e.g., performances, writings, paintings, lab reports, speech) that could be used for assessment;
- encourage use of technology and other tools; and
- be adaptable to students with special needs or considerations.

Activities should not be disconnected things for students to do. Rather they must be designed to meet overall parameters of guiding questions. Activities should be structured to lead students progressively through required content. There is no magic number of activities for each guiding question. Some activities may be broad enough that a single "project" may thoroughly address the guiding question. At other times, a half dozen related activities may help students explore different aspects of the guiding question.

Decide: How will these activities support what my students need to know and be able to do?

<u>Other Considerations</u>

As you design a class or unit, you should consider the following issues.

Resources

As you design, the activities for the class or unit, you also will want to compile a bibliography of resources. Resources may include information from content associations, reference materials, Web sites, community resources, or even student reading materials.

Technology Integration

Almost every lesson can be strengthened by incorporating technology in some way. Technology cultivates learners' multiple intelligences by providing a variety of learning opportunities. Assistive and adaptive technology assist the user with disabilities in becoming an independent learner.

- Productivity tools (e.g., word processing, spreadsheet, database programs) may be used in all curricular areas by P-12 students and teachers. These software tools save time an reduce mistakes as data is organized and stored. Word processing programs enhance brainstorming and encourage creativity with the variety of formatting and editing options. (Examples of tools: Claris Works, Claris Works for Kids, Microsoft Office)

- Communicating via electronic mail (e-mail) and conducting research on the Internet are powerful learning strategies applicable to almost all subjects and grade levels. Students may ask questions of experts and students in other locations via e-mail with online projects. Students and teachers who are proficient in searching strategies can locate current, applicable information on the Internet even more quickly. Academic Villages, which provide additional resources for most content areas, may be accessed from KDE's Web pages at <http://www.kde.state.ky.us> -click on Kentucky's Academic Villages. (Examples of tools: Microsoft Exchange, Netscape Navigator)

- Specific content-based software may also be integrated into each content area with all grade levels. Teachers may access electronic instructional material lists identified in the textbook adoption process on KDE's Web Site <http://www.kde.state.ky.us> -click on Technology-click on Instruction- click on Electronic Instructional Materials. Additional software reviews may be accessed on the Internet at the Southern Region Education Board's evaluation Web page <http://www.evalutech.sreb.org>.

- Reference CD-ROM software and online reference database (e.g. periodical, encyclopedia) are often used either in the library media center or in the classroom to support student and/or teacher inquiry. The library media specialist can teach appropriate search strategies for the tools. (Examples of databases: UMI Pro Quest, Britannica Online)

- Presentation software and desktop publishing programs allow students and teachers to synthesize and deliver information in innovative ways. (Examples of software: Microsoft Power Point, HyperStudio, PageMaker)

- Other technologies such as graphing calculators, laser disks, and distance education should be considered to provide additional learning opportunities. Graphing calculators are utilized in science and math classes to develop models of mathematical principles. Laser disc technology permits large groups of students to view scientific experiments/dissections which cannot be conducted in class. (Examples of laser disk software: Windows for Science, Great Ocean Rescue.) The Kentucky Telelinking Network (KTLN), an example of distance education, involves students within various locations in the Commonwealth in discussing issues and solving real-world problems. For more information on KTLN refer to the Kentucky Academy for Technology Education Web page at <http://www.mursuky.edu/kate/kate.htm> for more information on KTLN.

Extensions for Diverse Learners

Introduction

Every good teacher knows that no two students learn at the same pace, to the same level, at the same time, in the same way. Effective educators instinctively address the uniqueness of each student, considering it part of the natural and necessary aspect of educating students. In an effective classroom teachers use materials, methods, or services that address the unique needs of the students naturally immersed in the context of the classroom. The effective teacher will do whatever it takes for students to be successful, from something as simple as giving a student five extra minutes to finish an assignment to something as extravagant as dressing up as Macbeth to engage students in Shakespearean studies.

As educators, we must design instruction and assessment in such a way that it accommodates ALL students. This is not as difficult as it may seem. Providing extensions requires that educators understand the relationships of the needs, interests, and abilities of the student to the instruction and assessment. Teachers then use this information for intentional and deliberate planning when developing and delivering instruction and assessment. In short, providing extensions ensures that the student has what she or he needs to benefit from the instruction and assessment.

The intention of making educational extensions is to build a student's opportunity for learning and reduce barriers to learning, NOT to diminish the integrity of content, instruction or assessment. Extensions provide access to curriculum and content that otherwise may not be experienced, thus increasing the student's level of knowledge and skills. Increasing the access to the content transforms the students from passive to active learners, which in turn increases their success rates.

For most students with diverse learning needs, providing extensions requires changes to the environment, materials, and instruction or assessment routines that are necessary for students to be successful. The types of extensions needed in an instructional or assessment environment depend upon the student, the environment, the content, skills, and processes necessary for learning. For one student, only one type of extension may be necessary to address learning needs. While for another student, the complexity of the student's needs or the content, skills, and processes required for learning may necessitate several types of extensions to access the content and participate in learning.

What are Extensions?

Extensions are the methods, materials, services, and environments of instruction and assessment that allow a student to be successful. Extensions are provided to ensure students reach their intended goal without jeopardizing the integrity of the content or learning processes.

For students with disabilities, extensions include the specially designed instruction as indicated on their Individual Education Programs (IEPs). Specially designed instruction includes the

> ...modifications or alterations in instruction methods, techniques, materials, media or content, including physical and environmental adaptations that are unique or different from those used with most or all of the children or youth of the same or similar age, but which are required for a student with educational disabilities to meet IEP goals and objectives. Specially designed instruction includes instructional services and community experiences needed to meet transition needs and assistive technology devices and services (707 KAR 1:210).

For example, a student with a visual impairment who is provided with extensions such as large print text books, books or lessons on tape, low vision devices, or Braille books to allow access to content and engage in learning.

There are extensions provided for students in every learning situation that seem so simple we almost forget they are there. We take them for granted as natural to the environment. For example, in public schools we "extend" to students a teacher, the use of tables or desks, overhead lighting, textbooks, and other materials, all of which are important for students to benefit from learning. These items are so naturally ingrained in most educational environments that we do not typically think of them as materials or services which are necessary for the students to be successful in their learning.

When planning classes or unit frameworks, instruction and assessment, teachers must consider and provide for students who require extensions that are different from those we typically offer for all or most students in a classroom. For students whose first language is not English and who have limited English proficiency, classes or unit frameworks routinely include not only content standards for the discipline, but also language objectives specific to the content and development of speaking, listening, writing and reading. Extensions that activate prior knowledge, provide language support, and reduce language demands become a necessary component in designing effective instruction to meet the needs of students with limited English proficiency. For example, teachers may use scaffolding, semantic maps or other graphic organizers, dialog journals, or various forms of multimedia to support language and content learning. In addition, they may use other research-based approaches (e.g., the Cognitive Academic Language Learning Approach (CALLA), the Total Physical Response (TPR) Approach, the Natural Approach).

For gifted and talented students, extensions are necessary to meet the requirement to provide differentiated curricula matched to diagnosed student interests, needs, and abilities (704 KAR 3:285). Differentiation requires extending, replacing, or supplementing learning beyond the standard curriculum. For example, a student who is gifted and talented in science and math or a student who has an interest in medical research, is matched to a mentor in medical research at a hospital or university either through face-to-face opportunities for interaction or though technology.

The challenge for teachers is to determine the difference between typical extensions and those unique extensions necessary for a student to meet specific educational goals. The primary difference between what the typical student needs and what the diverse learner requires is in the **degree** of change from what is normally provided.

Case Studies

The majority of Ms. Wolf's class is learning about the five food groups. However, Blake has already mastered the skills identified in this health unit and needs challenging work two grade levels above his peers. Instead of making him repeat work he has already mastered, the extensions for Blake included developing a research contract between the teacher and him in which he would research the amino acids, vitamins, and minerals found in different food groups.

Several extensions were designed for Blake:

- *He participates differently in the learning (conducts independent research instead of group work).*
- *The materials will be different (higher level vocabulary, more complex content).*

- *His demonstration of knowledge will be different (creating a report instead of a food guide pyramid).*

Another student in the class, Beth, has an IEP goal for reading comprehension. To meet this goal, the specially designed instruction requires that Ms. Wolf provide highlighted materials and a note-taking guide for answering factual questions.

Two basic extensions were provided for Beth:

- *Highlighted materials (indicating the most important facts for her to know and remember) are provided.*
- *The identified routines she would use to learn (note-taking guide) provide assistance in identifying important information.*

In all, there are at least thirteen (13) different types of extensions to consider and provide for students without jeopardizing the integrity of the content or learning. Extensions provide equity for learning. For more information on these types of extensions, see the next page.

Which Students are Eligible for Extensions?

Extensions are provided for all students to facilitate access to content and learning. However, there are specific laws and regulations which require providing extensions for certain students to ensure they have both the opportunity to learn and the support structures necessary to assist them in reaching higher expectations. When we think of students who are typically provided extensions, we usually think about students with limited English Proficiency (LEP), gifted and talented students, students with disabilities, and students participating in Title 1 or other support services.

Federal and state laws provide for and protect students who have diverse learning needs by requiring planning and implementation of successful instruction activities, strategies and assessments. These include extensions to ensure students have access to and involvement in the curriculum and assist with the attainment of high expectations. Such laws include

- Individuals with Disabilities Education Act Amendments of 1997
- Section 504 of the Rehabilitation Act of 1973
- Kentucky Revised Statutes
- Kentucky Administrative Regulations Related to Exceptional Children
- Kentucky Administrative Regulations Related to Gifted and Talented students
- Title VI of the Civil Rights Act of 1964
- Equal Education Opportunities Act of 1974
- Title VII, Bilingual Education Language Enhancement and Language Acquisition Program under Improving America's School Act
- Americans with Disabilities Act

What are Specific Types of Extensions?

Based upon research, including eleven (11) years of classroom research across Kentucky schools, at least thirteen (13) different types of extensions have been identified that have proven to be effective in ensuring that students have access to content and attain high expectations without negatively impacting the integrity of the content, instruction, or assessment. As a class or unit framework is designed, it is important to develop appropriate learning activities for all students. Any unit or class design should allow for diverse needs. A brief description and examples of each extension are provided below.

- Purpose and Appropriateness of Task matches the intent, goal, or reason for the task to the interests, needs, and abilities of the student. Example: write a resume for a summer job, mentor with a scientist if that is an occupational goal, build English language skills along with discipline content knowledge.

- Complexity of Task identifies the level of sophistication or depth of the task, approach to problem, process for solving problems, dimensions, degree of decision-making required, or level of challenge, Examples: measure using the nearest inch instead of the nearest quarter inch, use a four step problem solving process instead of an eight step process, devise a new formula, research and create a novel product.

- Size of Task/Magnitude specifies the quantity, scope, magnitude, or proportions of the task. Examples: use three research tools instead of five; conduct on-going, year-long research instead of a five week project; interview one person rather than four.

- Time specifies the duration, cycle, length, or interval for learning and demonstrating knowledge. Examples: assess at smaller intervals, allow additional time without penalty, eliminate task or assignment if pretest indicates mastery.

- Pace, Rate, Velocity, Speed, or Acceleration of Learning identifies time related aspects of assignments. Examples: eliminate unnecessary practice to reduce redundancy; complete course over two semesters instead of one.

- Environment of Learning identifies a variety of settings, situations or domains necessary for learning, access and need for specialized resources, or physical characteristics of environment. Examples: community learning opportunities, wall charts for visual stimuli, seating arrangements, university courses or projects.

- Order of Learning gives attention to student's prior knowledge to determine the appropriate instruction sequence, priority, or progression of learning experiences. Examples: teach/review prerequisite skills, use curriculum compacting, activate prior knowledge, teach language of content, teach text structure first, model an algorithm using multiple examples.

- Procedures and Routines identify a variety of methods used to organize; manipulate; and translate content, skills, and processes into understandable structures for students. Examples: flexible grouping routines, mastery learning, advanced organizers, *Content Enhancement Routines,* and guided practice.

- Resources and Materials identify software, equipment, fixtures, gear, supplies, print, nonprint, human resources, and furnishings appropriate for learning. Examples: dark colored markers, large-print

textbooks, graphics, audiotapes, e-mail contact with research professor, Internet connections with other second language learners, Phonic Ear, speech-text converter, captioned programs.

- Application and Demonstration of Knowledge identifies the process of transferring learning to real life situations by making connections among familiar and unfamiliar ideas and settings demonstrated through performances and or products. Examples: learning logs, varied test formats, book report instead of an essay, presentation of independent project recommendations to the city council, presentations in one's native language, modified performance standards.

- Level of Support and Independence specifies the degree of dependence/independence, need for direct or indirect guidance, or encouragement. Examples: job coaching, independent studies, interpreter support, bilingual mentors.

- Participation identifies the degree of interaction for optimum learning. Examples: active learning, group instead of individual projects, individual research mentorships.

- Motivation provides incentives (intrinsic/extrinsic) that match the student's needs, abilities and interests. Examples: student teacher partnership, goal setting, menu of reinforcers for token economy system, independent pursuit of intense interests, making connections to one's culture.

Who is Responsible for the Design and Implementation of Extensions?

The teacher who provides the instruction and assessment for the student is ultimately responsible for the implementation of the extensions. For example, the gifted specialist teacher may arrange for a student to work with a university professor on a project that will meet requirements for a classroom assignment. In many cases, there is a team of teachers who work together to identify specific extensions that students will need for daily instruction.

Case Study

Glenna completely comprehends information when it is presented orally, but she only understands written information on or about the fourth-grade level. She will be in the eighth grade this fall. As the eighth-grade science teacher prepares instruction for the beginning of the school year, she works with the special education teacher to develop extensions that will help Glenna understand the content from the written textbook and other print materials in different ways. The teachers agree to have the chapters in the text put on audio tape so Glenna can listen to the information from the text book and gain the content knowledge. In addition, they agree that any written information used in class will be either read aloud, read to her before class, or rewritten using semantic maps to build vocabulary and relationships of concepts so she can comprehend the content. In addition, she receives instruction to develop reading fluency and comprehension monitoring. Glenna's language arts classroom is organized as a reading/ writing workshop.

The decision regarding who will actually create extensions that must be developed (e.g., make tapes, modify the texts) is made by the team of teachers. Different teams choose different roles. For example, the special education teacher may make modified text books while the general education teacher has students from the high school make audio tapes of the text books as part of their service learning program.

How are Extensions Determined and Designed?

When teachers design instruction and assessment, general decisions are made regarding the content and skills to be taught, instructional methods and activities used, prerequisite skills, and the materials necessary for learning. The challenge is taking the general decisions about the instruction and assessment and applying those decisions to individual students who require specific extensions. Below is a brief list of the most basic questions to ask as instruction and assessment is matched to the unique needs of individual students.

1. What are the interests, needs, and abilities of the student?

   Example 1: Joe loves airplanes and other mechanical objects. He has difficulty with writing words on paper, but can verbally explain what he knows. He is distractible and requires quiet when writing.

   Example 2: Janet's teacher has a wide range of interests but especially likes animals. She reads two years beyond grade level, has an advanced vocabulary, performs at or near the top of the class in all subjects, has few friend, attends a pullout for intellectually gifted students two hours per week.

2. What specific instructional or assessment needs will this student have in any educational situation? That is, does the student understand and use appropriate learning strategies? Does the student understand the language of the instruction? Does the student have the reading skills for the written materials?

   Example 1: Joe can verbally express what he knows, but he has difficulty with writing. Therefore, in any writing situation across the curriculum he may need extensions for written work such as audiotaping his test responses or journal entries.

   Example 2: To ensure continuous progress and challenge, Janet will need ready access to advanced level reading materials across all content areas. It will be important to access her knowledge of content prior to teaching (e.g., using pretests) to eliminate unnecessary repetition and to assist in placing her in an appropriate instructional group.

3. How will the student's specific needs impact and be impacted by the content, instruction, and assessment as it is typically provided in a specific content area?

   Example 1: Instruction and assessment in a topic area require extensive writing. Joe writes slowly and requires additional time to complete writing assignments.

   Example 2: Students such as Janet typically become underachievers if given tasks which are too easy. Flexible instructional grouping with students of similar ability will meet some of her social emotional needs as well as learning needs.

4. What is the match among the content, instruction, and assessment and the student's interests, needs, and abilities?

Example 1: Joe's interest in airplanes and mechanics will enhance interest in algebraic equations that relate to these properties. He can verbalize mathematical equations quickly and accurately, but he cannot write them quickly.

Example 2: Janet's teacher consults with the gifted education specialist classroom teacher to identify Janet's specific needs. They plan together who will be responsible for meeting each of the identified needs and what materials resources and service options are most appropriate to meet Janet's needs.

5. Are there indications that some aspect of the environment may interfere with or enhance student learning?

   Example 1: Joe needs a quiet place without distractions when required to write, but his classroom is an "open" room connected to other rooms.

   Example 2: Janet needs ready access to advanced, complex materials and instruction. This may include regular instruction in a content area in a classroom with older students, use of technology not available in the classroom or off-site investigations with a mentor.

6. What types of extensions are indicated for the student?

   Example 1: environment, materials, demonstration of knowledge.

   Example 2: purpose and appropriateness, complexity environment, procedures and routines level of support, demonstration of knowledge, resources and materials, order of learning.

7. What is the simplest degree of change in an extension that can be provided that will maximize the student's learning?

   Example 1: Provide Joe with a quiet space for studying, free of distraction, when he is to do written work (environment). Allow Joe to use audiotapes or voice-to-text on the computer to respond to work (materials). Allow Joe to present information visually or orally instead of always in written format (demonstration of knowledge).

   Example 2: Place Janet in an instructional reading group with others of similar measured ability (procedures and routines). Use novels beyond grade level and assign more complex analysis tasks (resources and materials, complexity, demonstration of knowledge).

Extensions allow all students to access the curriculum, to be challenged by the curriculum, and to be actively engaged in learning. Planning extensions initially as you design your classes, unit frameworks and activities provides meaningful opportunities for students to learn. The following chart provides additional examples of extensions you may wish to use as you develop your unit framework and classes.

Extensions for Diverse Learners

Extension	Description	Extension Examples
Purpose and Appropriateness of Task	Matching the intent, goal, or reason for the task to the interests, needs, and abilities of the student	• write a resume for a summer job • match math activities to after school job site requirements • mentor with a research scientist • learn and make healthy food choices in a natural environment • target specific language skills
Complexity of Task	Level of sophistication of task; depth; approach to problem; process for solving problems; dimensions; degree of decision making required; level of challenge	• measure wood products to the nearest inch instead of the nearest quarter inch • develop a software program to monitor and analyze water pollution levels • participate in a philosophical inquiry seminar on justice • develop a bill on tobacco use and apply the steps for taking a proposed bill through the House (instead of comparing the process of taking the bill through both the House and the Senate) • vary complexity of open-response questions to target application of skills and content based on needs, interests, and abilities of student
Size of Task/ Magnitude	Quantity, scope, size, proportions of task	• alter performance criteria (e.g., use three research tools rather than five) • reduce assignments • conduct an ongoing, year-long research project instead of a 5-week research project • complete 5 math problems instead of 25 • write a novelette instead of a short story • compare and contrast one's own culture with another culture rather than multiple cultures

Extensions for Diverse Learners (cont.)

Extension	Description	Extension Examples
Time	Duration, cycle, length or intervals for learning and demonstrating knowledge	• schedule assessment at different intervals • adjust duration of practice opportunities to student needs • provide additional time without penalty • reduce duration of seat work • decrease time for students who already know the information
Pace	Rate, velocity, speed, acceleration of learning	• eliminate unnecessary practice to reduce redundancy • complete a course in half time or allowing a course to cover two semesters or two blocks
Environment of Learning	The variety of settings, situations or domains necessary for learning; access and need for specialized resources; physical characteristics of environment	• community involvement and learning opportunities • seating arrangement • posted assignments in classroom • structured/consistent classroom routines • reduction of external stimuli • ready access to a variety of learning or investigative environments (other levels of public education, higher education) • wall charts with visual aids for steps, processes, formulas, rules • allow to sit in different places (seat, bean chair, floor) • post routines/expectations • middle school student takes class at high school • field work sites for learning; use scientific lab at research institute; conduct water quality study on several farms; bring in specialist on alternate uses of tobacco • teacher models attitudes towards excellence and lifelong learning • student chooses learning path for solar system • student investigates a new theory on the extinction of dinosaurs

Extensions for Diverse Learners (cont.)

Extension	Description	Extension Examples
Order of Learning	Attention to student's prior knowledge to determine the appropriate instructional sequence, priority, or progression of learning experiences	• teach/review prerequisite concepts before new information • use pretest to determine what student already knows • allow student to use calculator for multiplication facts and move to higher level math skills • learn history from issues and patterns rather than chronological approach • use curriculum compacting • introduce content/concepts in appropriate stages or segments (e.g., smaller steps or larger leaps)
Procedures and Routines - Input	The variety of methods used to organize, manipulate and translate content, skills and processes into understandable structures for students	• flexible grouping routines • write problems (board, overhead, written document) • scaffold open-response questions having multiple parts • use content enhancements in delivery of instruction (mapping, visual aids, analogies, mnemonics, organization of information strategies) • use advance organizers and post organizers • use visual and auditory attention signals • use mastery learning (e.g., opportunity to retake) • use examples/nonexamples to teach concepts or content • allow self-correction opportunities (e.g., error correcting) • use specific content related manipulative materials or models to encourage mental processing (e.g., algebra tiles) • use guided and independent practice as appropriate • teach and use organizational routines (e.g., binders with dividers) • teach concept/content in connection with real life experiences

Extensions for Diverse Learners (cont.)

Extension	Description	Extension Examples
Procedures and Routines - Input Continued	The variety of methods used to organize, manipulate and translate content, skills and processes into understandable structures for students	• use modeling techniques to enhance content/concepts (e.g., metacognitive, self-talk strategies, demonstration) • vary the delivery and assessment of content/concepts with attention to learning styles, multiple intelligences (e.g., drama, science lab, video) • use rubrics and exemplars • use feedback loops and reflection practices • use contract • build in the use of mentors for planned instruction to enhance content • instruct using multisensory approaches • use individual memory devices or strategies • provide factual/content or procedure on reference sheet or audiotape • use reading/writing workshop.
Resources and Materials	The software, equipment, fixtures, gear, supplies, print, nonprint, human resources, and furnishings appropriate for learning	• dark colored markers • large print • color, shape or size to address similarities and differences • board, overhead, paper, or graphs • audiotapes (e.g., taped reading, taped responses for assignment) • dividers in notebooks for organizing materials • manipulatives • interactive learning networks • online Internet mentor • learner tools (e.g., glossary, calculator, word banks, grammar/spell check) • computer (e.g., practice, drills, tutorials, simulation, written products) • different page formats • 3-D models • individual notecards with directions, formulas, steps, procedures, rules, and processes • videos • adaptive switches • historic time lines charts • audio texts, adapted text • speech to print software for notetaking

Extensions for Diverse Learners (cont.)

Extension	Description	Extension Examples
Resources and Materials Continued	The software, equipment, fixtures, gear, supplies, print, nonprint, human resources, and furnishings appropriate for learning	• notes to support learning • range of complexity in literature, resources, realia to support learning • bilingual dictionaries • translators • reference resources (e.g., encyclopedia, atlas)
Application and Demonstration of Knowledge	The process of transferring learning to real life situations by making connections among familiar and unfamiliar ideas, settings demonstrated through performances and/or products	• learning logs • variety of options to demonstrate learning (e.g., brochures, cartoons, diagram, dance, poster, oral, written, demonstration, model, art, community problem solving, academic competitions) • offer variety of test formats (questions/ responses) • dialogue journals
Level of Support and Independence	Degree of dependence/independence; need for direct or indirect guidance, encouragement	• pairs learning • job coach • correspondence course • time management strategies • team or small group project • cooperative learning • group presentations • partner generated tasks • independent problem solving • partner or group discussions to solve problems • peer or crossage tutor. • mentorships • paraprofessional • self-monitoring • contracts

Extensions for Diverse Learners (cont.)

Extension	Description	Extension Examples
Participation	Degree of interaction for optimum learning	• active learning (e.g., self questioning strategies, metacognitive and cognitive strategies, visual imagery, self-monitoring) • individually targeted purpose for involvement (e.g., social interaction, application of social skills in cooperative learning group, peer models) • use of engaging tasks, activities, assignments which require active student participation, thought, and action • individual student selection of participation (e.g., research habitats, build habitat, design habitat) • application of knowledge based on personal interests, needs, and abilities
Motivation	Incentives - extrinsic or intrinsic - that match to the student's needs, interests and abilities	• student/teacher partnership - student choice in selecting literature, ways to demonstrate learning, ways to approach learning • goal setting • personal contracts (individual student) • personal and/or class charting of progress • meaningful tasks and assignments useful to self or others (e.g., constructing personal budget, budget for business) • self selection and design of student projects and activities • using novel approaches to learning • using multiple intelligences • develop community of learners offering voice, choice, respect • student choice of topics, themes, projects • self selected topics for research • opportunities for motivated students to take honors and advanced studies based on student interest • accelerated options for learning • service learning • clear structure and rewards • mentorships • free time connected to task completion • positive notes to parents and students

Diverse Learners Resources
Publications: Books

Adams, Marilyn Jaeger. *Beginning to Read Thinking and Learning about Print*. Cambridge, MA: The MIT Press, 1994.

Ashworth, Mary. *The First Step on the Longer Path Becoming an ESL Teacher*. Markham, Ontario: Pippen Publishing Limited, 1992.

Chamont, Anna Uhl, and J. Michael O'Malley. *The CALLA Handbook.* Reading, MA: Addison-Wesley Publishing Company, 1994.

Children and ESL: Integrating Perspectives. Edited by Pat Rigg and D. Scott Enright. Washington, DC: Teachers of English to Speakers of Other Languages, 1986.

Cooney, Thomas J., Stephen I. Brown, John A. Dossey. George Schrage, Erich Ch. Wittman. *Mathematics, Pedagogy, and Secondary Teacher Education.* Portsmouth, NH: Heinemann, 1996. ISBN # 0-435-08377-5.

Corwin, Rebecca B., Judity Storeygard and Sabra L. Price. *talking mathematics Supporting Children's Voices.* Portsmouth, NH: Heinemann, 1996.

Countryman, Joan. *Writing to Learn Mathematics Strategies that Work.* Portsmouth, NH: Heinemann, 1992.
ISBN # 0-435-08377-5.

Deschenes, C., D. Ebeling, and J. Sprague. *Adapting Curriculum & Instruction in Inclusive Classrooms: A Teacher's Desk Reference*. Bloomington, IN: The Center for School and Community Integration Institute for the Study of Developmental Disabilities, 1994.

Five, Cora Lee. *Special Voices*. Portsmouth, NH: Heinemann, 1992.

Freeman David E., and Yvonne S. Freeman. *Between Worlds Access to Second Language Acquisition*. Portsmouth, NH: Heinemann, 1994.

Freeman, Yvonne S., and David Freeman. *Whole Language for Second Language Learners.* Portsmouth, NH: Heinemann, 1992.
ISBN # 0-435-08723-1.

Gibbons, Pauline. *Learning to Learn in a Second Language*. Portsmouth, NH: Heinemann, 1991.

Hemmerich, Hal, Wendy Lim, and Kanwal Neel. *Prime Time Strategies for life-long learning in mathematics and science in the middle and high school grades.* Portsmouth, NH: Heinemann, 1994.
ISBN # 0-425-06363-5.

Lipke, Barbara. *Figures, Facts, and Fables Telling Tales in Science and Math.* Portsmouth, NH: Heinemann, 1996.
ISBN # 0-435-07105-X.

Mastropieri, Margo A. and Thomas E. Scruggs. *Teaching Students Ways to Remember Strategies for Learning Mnemonically*. Cambridge, MA: Brookline Books, 1991.

Mercer, Cecil D., and Ann R. Mercer. *Teaching Students with Learning Problems.* New York, NY: Macmillan Publishing Company. 1993.
ISBN # 01-380561-7.

Mills, Heidi, Timothy O'Keefe, and David Whitin. *Mathematics in the Making Authoring Ideas in Primary Classrooms.* Portsmouth, NH: Heinemann, 1996. ISBN # 0-435-07100-9.

Moll, A. *Creating a Single Service Delivery System Using a Collaborative Teaching Model in Kentucky Schools*. UMI: Dissertation Abstracts, 1996.

Ohanian, Susan. *Math at a Glance A Month Celebration of the Numbers Around Us.* Portsmouth, NH: Heinemann, 1995. ISBN # 0-435-08364-3.

Parker, Ruth E. *Mathematical Power Lessons from a Classroom.* Portsmouth, NH: Heinemann, 1993.

Parker, Ruth E. Mathematical Power. Portsmouth, NH: Heinemann, 1993. Backhouse, John, Linda Haggarty, Susan Pirie and Jude Stratton. *Improving the Learning of Mathematics.* Portsmouth, NH: Heinemann, 1992.
ISBN # 0-435-08330-9.

Piper, Terry. *And Then There Were Two Children and Second Language Learning*. Markham, Ontario: Pippen Publishing Limited, 1993.

Peyton, Joy Kreeft, and Jana Staton. *Dialogue Journal Writing with Nonnative English Speakers An Instructional Packet for Teachers and Workshop Leaders*. Alexandria, VA: Teachers of English to Speakers of Other Languages, 1992.

Readence, J. Bean, and R. Baldwin. *Content Area Reading: An Integrated Approach.* Dubuque, Iowa: Kendall/Hunt, 1981.

Reif, S., and J. Heimburge. *How to Reach and Teach All Students in the Inclusive Classroom*. West Nyack, NY: The Center for Applied Research in Education, 1996.

Rhodes, Lynn K., and Curt Dudley-Marling. R*eaders and Writers with a Difference*. Portsmouth, NH: Heinemann, 1988.

Richard-Amato, Patricia A. *Making It Happen Interaction in the Second Language Classroom From Theory to Practice*. White Plains, NY: Addison-Wesley Publishing Group, Longman, 1996.

Rowan, Thomas, and Barbara Bourne. *Thinking Like Mathematicians.* Portsmouth, NH: Heinemann, 1994.
ISBN # 0-435-08343-0.

Sawyer, Ann. *Developments in Elementary Mathematics Teaching.* Portsmouth, NH: Heinemann, 1995.
ISBN # 0-435-08371-7.

Stoessiger, Rex and Joy Edmunds. *Natural Learning and Mathematics.* Portsmouth, NH: Heinemann, 1992.
ISBN # 0-17-008825-1.

Scheid, Karen. *Helping Students Become Strategic Learners Guidelines for Teaching*. Cambridge, MA: Brookline Books, 1993.

The Teacher's Reference Book. Port Chester, NY: National Professional Resources, Inc., 1996.

Tsurda, Gary. *Putting It Together Middle School Math in Transition.* Portsmouth, NH: Heinemann, 1994.
ISBN # 0-435-08355-4.

VanDover, T. *The Inclusion Guide for Handling Chronically Disruptive Behavior*. Port Chester, NY: National Professional Resources, Inc., 1996.

Whitin, David J., and Sandra Wilde. *It's the Story That Counts.* Portsmouth, NH: Heinemann, 1995. ISBN # 0-435-08369-4.

With Promise Redefining Reading and Writing for "Special" Students. Edited by Susan Stires. Portsmouth, NH: Heinemann, 1991.

Wood, Karen D. *Practical Strategies for Improving Instruction*. Columbus, OH: National Middle School Association, 1994.

Zaslavsky, Claudia. *The Multicultural Math Classroom Bringing in the World.* Portsmouth, NH: Heinemann, 1996.
ISBN # 0-435-08373-2.

Publications: Instructional Teaching Materials

Bulgren, Janis A., Jean Schumaker, and Donald D. Deshler. *The Concept Anchoring Routine.* Lawrence, KS: Edge Enterprises, 1997.*

Bulgren, Janis A., Jean B. Schumaker, and Donald D. Deshler. *The Concept Mastery Routine*. Lawrence, KS: Edge Enterprises, 1994.*

Bulgren, Janis A., B. Keith Lenz, Donald D. Deshler, and Jean B. Schumaker. *The Concept Comparison Routine.* Lawrence, KS: Edge Enterprises, 1995.*

Deshler, Donald D., Jean Schumaker, and Philip C. McKnight. *The Content Enhancement: Survey Routine.* Lawrence, KS: University of Kansas Center for Research on Learning, 1997.*

Hughes, Charles A., Kathy L. Ruhl, Donald D. Deshler, and Jean B. Schumaker. *The Quality Assignment Routine*. Lawrence, KS: Edge Enterprises, 1998.*

Lenz, Keith, B., Janis A. Bulgren, Jean B. Schumaker, Donald D. Deshler, and Daniel A. Boudah. *The Unit Organizer Routine*. Lawrence, KS: Edge Enterprises, 1994.*

Lenz, B. Keith, Richard W. Marrs, Jean B. Schumaker, and Donald D. Deshler. *The Lesson Organizer*. Lawrence, KS: Edge Enterprises, 1993.*

Lenz, Keith, B., Jean B. Schumaker, Donald D. Deschler, and Victoria L. Beals. *The Word Identification Strategy.* Lawrence, KS: University of Kansas Center for Research on Learning, 1993.*

Nagel, Dana Robbins, Jean B. Schumaker, and Donald D. Deshler. *The First-Letter Mnemonic Strategy*. Lawrence, KS: Edge Enterprises, 1986.

Schumaker, Jean B., Donald D. Deshler, Alice Zemitzsch, and Michael M. Warner. *The Visual Imagery Strategy.* Lawrence, KS: University of Kansas Center for Research on Learning, 1993.*

Schumaker, Jean B., Pegi H. Denton, and Donald D. Deshler. *The Paraphrasing Strategy.* Lawrence, KS: University of Kansas Center for Research on Learning, 1993.*

Schumaker, Jean B., Susan M. Nolan, and Donald D. Deshler. *The Error Monitoring Strategy.* Lawrence, KS: University of Kansas Center for Research on Learning, 1987.*

Schumaker, Jean B. and Jan Sheldon. *The Sentence Writing Strategy*, Lawrence, KS: University of Kansas Center for Research on Learning, 1991.*

Van Reusen, Anthony K., Candace S. Bos, Jean B. Schumaker, and Donald D. Deshler. *The Self-Advocacy Strategy for Education and Transition Planning*. Lawrence, KS: Edge Enterprises, 1994.

*Requires training.

Additional references and resources are found in the content specific sections of this document.

Designing Classes or Unit Frameworks Using a Functional Approach

Organizing Content for Instruction

Throughout the *Implementation Manual*, you will see examples for organizing the required content of the *Program of Studies* in various ways. Your schools and districts have flexibility in organizing content to meet the needs of students. Alternatives may include using any one or a combination of the following approaches to design classes or unit frameworks:

- discipline-based (traditional),
- integrated,
- interdisciplinary,
- applied, and
- functional.

The first four approaches are described in the section "Designing Your Own Classes or Unit Frameworks" in this document. The "functional approach" is discussed in this section since the high school graduation regulation links this approach to exceptional students. However, this approach is grounded in instructional design and delivery principles which are appropriate for all children and youth at all levels, and was designed with all students in mind.

Functional Approach

The term "functional" is one way schools can organize and deliver the rigorous content described in the *Program of Studies* to meet the academic expectations. **A functional approach to delivering content means: using multiple learning methods in a variety of school, work, home and community settings to provide a continuous learner-paced delivery model with real world applications.** Centered in this approach is the student. There is a direct match to the needs, interests, and abilities of a student. It means using the same rigorous content standards from the *Program of Studies* and matching learning methods and activities to the needs, interests and abilities of a student. The following chart illustrates how the definition for "functional approach" has changed.

How is the new definition for "functional approach" different from the past definition?	
What "Functional" Is	**What "Functional" Is Not**
An approach to designing and delivering courses, and units of study for all students based on the content standards in the *Program of Studies*	A course to meet the high school graduation requirements or unit frameworks based on separate or different content standards from the general education curriculum
Content in the *Program of Studies* appropriate for the specified grade level	Content below grade level (e.g., elementary content for high school), separate, or different content
High expectations for all students	Low expectations
Knowledge of content and effective strategies for teaching and communicating content so all students can access the content	A lack of knowledge of the content of the *Program of Studies*, research-based strategies and methods that ensure student access to the content
A belief system that all children can learn given appropriate instruction	A belief system that some children cannot learn
Applicable across all content areas	Application only to some content areas
An approach for all students and essential for some exceptional students	An approach only for students with disabilities
An approach which matches instruction to the needs, interests, and abilities of an individual student	A class or unit framework which does not match instruction to the needs, interests, and abilities of an individual student
An approach rich in a variety of instructional methods, intentional learning experiences, use of real word contexts, and focused on the individual	An approach to class and unit framework design and delivery limited in instructional methods, intentional learning experiences, and use of real word contexts
An approach grounded in instructional design and delivery principles appropriate for all children	An approach grounded in instructional design and delivery principles not appropriate for all children

The functional approach provides a structure to enable

- all students to access, participate in, and progress in the general education curriculum and attain Kentucky's learning goals and academic expectations;
- delivery of the content standards of the *Program of Studies* to meet diverse learning needs;
- curriculum-based learning focused on the content knowledge, skills, and processes students need to know and be able to do;
- matching of supplementary aids, instructional routines, and services to support the opportunity to learn and access to the general education curriculum; and
- planning instruction and teaching the same content, processes, and skills to students with a variety of diverse needs, interests, and abilities.

Using the functional approach involves

- making decisions about how to organize content for learning in authentic real work contexts;
- selecting and matching instructional routines and procedures to present content matched to individual student needs, interests, and abilities;
- understanding and thinking about the content of the general education curriculum in order to intentionally link the core concepts, ideas, facts, and details so students understand their relationships; and
- thinking about student learning at a variety of levels — systematically from the perspective of the district and school or at the course, classroom, and individual student levels.

The key features of a functional approach are

- multiple learning methods,
- learner focused, and
- real-world applications in a variety of settings and contexts.

A course, class, or unit framework is developed using a functional approach when the course meets the standards for each of the key features of the definition described in the chart on the following page.

Standards for the Key Features of a Functional Approach

Learner Focused

- Guiding questions are intentionally designed to relate content to the needs, interests, and abilities of the student.
- Content varies in complexity, depth, and intensity matched to individual student needs, interests, and abilities.
- Varied and multiple uses of technology (e.g., assistive technology devices, multimedia word processors, KTLN, books on tape, adaptive devices, Internet, pencil grips), matched to the needs, interests, and abilities of the student, are embedded in day to day instruction.
- Instructional framework allows for flexible performance standards matched to the individual student needs, interests, and abilities.
- Continuous progress is matched to the individual student needs, interests, and abilities and embedded in instruction and evaluated throughout the course of instruction.
- Intentional flexibility in rate/pace of learning (pace of study, pace of thought) is matched to the individual student needs, interests, and abilities and embedded in instruction.

Multiple Learning Methods

- Explicit instructional strategies and approaches (e.g., metacognition, modeling, problem-solving, scaffolding, mnemonics, reading/writing workshop, guided reading, reciprocal teaching) and routines are matched to the individual needs, interests, and abilities of the student.
- Flexible formats matched to individual student needs, interests, and abilities are used to reteach and extend content knowledge.
- Instructional formats, including instructional devices (e.g. content enhancement, anticipation guides, graphic organizers) matched to the individual student needs, interests, and abilities, are used to enhance content understanding.
- Instructional activities are matched to the needs, interests, and abilities of the student; based on the guiding questions; and intentionally build student knowledge throughout instruction to enable the student to use the acquired knowledge to answer the guiding questions.

Real World Application in a Variety of Contexts and Settings

- Culminating projects, exhibitions, and products are clearly related and generalized to the student's current and future personal, career, and life goals.
- Authentic tasks used for instruction and assessment of student performance are matched to the individual student needs, interests, and abilities.
- Learning activities, based on the guiding questions and content to be learned, are well anchored in real world contexts matched to the individual student needs, interests, and abilities.
- Critical thinking is embedded in authentic instructional activities and assessments matched to individual student needs, interests, and abilities.
- Multiple options are provided for generalization of content and concepts to a variety of contexts based on individual student needs, interests, and abilities.
- Instruction and assessment occur in multiple natural settings matched to individual student needs, interests, and abilities.

Functional Approach to Designing Models

Like discipline-based (traditional), integrated, applied, and interdisciplinary approaches, the functional approach is a framework to apply to the organization, design, and delivery of content for high school and middle school courses, unit frameworks, and classes. However, a functional approach goes one step further and views the delivery of content matched to the individual needs, interests, and abilities of a student, including the support structures necessary for successful implementation.

The functional approach is used to develop courses, classes, and unit frameworks using the content standards in the *Program of Studies* for a class or group of students or to design a course, class, or unit framework and instruction for an individual student. As stated before, the elements of the framework are based on instructional principles that are appropriate for all students while essential for some exceptional students. Not all exceptional students need a totally functional approach to learning content. Many students only need minimal extensions and then are successfully challenged by the content and supported in learning the content. When you begin to use most or all of the extensions referenced in "Extensions for Diverse Learners" then you are moving toward a functional approach. As you begin to design your course models, the more you embed the elements of the functional approach in your initial design of the model the more likely you will have developed a model more inclusive of all students in your classroom.

The functional approach **maintains the rigor of the content requirements** while recognizing

- students learn at different rates, time, and pace;
- the complexity of the content may vary;
- multiple and explicit instructional routines and procedures matched to the needs, interests, and abilities of an individual student are essential for optimal learning;
- the natural learning environment is critical for application and generalization of knowledge, skills, and processes, and
- there are many ways to demonstrate knowledge.

Steps for Developing a Course from a Functional Approach

The "Standards For The Key Features Of A Functional Approach" on the previous page may be used as a self-assessment to determine if your course is designed and implemented to meet the needs, interests, and abilities of an individual student. The standards are referenced for each of the key features of the definition for a functional approach.

As you use the standards for designing courses from a functional approach, notice the features of the framework represent the key elements in the definition for a functional approach: multiple learning methods, learner focused, and real world applications in a variety of settings and contexts. Remember the following points illustrated below as you begin to design courses from a functional approach.

The functional approach

- overlays any model: integrated, applied, interdisciplinary, applied, and discipline-based (traditional);
- maintains integrity and rigor of the content;
- allows for self-assessing the extent to which content is delivered in a functional approach;
- provides guidance for developing and implementing a functional approach;

- offers standards/indicators for organization and delivery of content;
- guides planning and decision-making to meet individual student needs, interests, and abilities within content;
- incorporates strategies responsive to learner diversity; and
- supports equity, excellence, and inclusiveness.

Step 1: First, use the steps in the section of this manual entitled "Designing Your Own Classes or Unit Frameworks." As you answer the "Think about questions" posed in the section related to "Designing Content" (which lead to completion of the content chart for your class or unit framework), begin to think about the diversity of your students. As you select the content for your class or unit framework, you may need to build in additional content for an individual student or a group of students to provide them with the foundation necessary for success in the new content. For example, you may have students who do not have the prerequisite vocabulary and concepts for the course. Other students, may already know the content and are ready for extending their content knowledge to a more complex level. Once you develop the content chart for your course the foundation for WHAT will be taught is completed.

Step 2: The next step is designing a class or unit framework which lays out HOW you will teach the content. One of your first decisions is deciding how to organize the content (discipline based/traditional, interdisciplinary, integrated, or applied). Since the functional approach is designed to overlay one of these other approaches, determine which approach will be used to organize the content following the process described earlier in the manual.

Step 3: As you continue to develop HOW you will teach the content, including the guiding questions and activities for the class or unit frameworks, think about how to develop the class or unit framework to match the individual needs, interests, and abilities of the students. Ask these preliminary questions:

- What do I know about individual students taking this course?
- How does each student learn?
- What does each student already know?
- If I have students in my class who need a functional approach, what adjustment in my personal style of teaching may be required?
- How would different background knowledge of my students affect designing a course?
- What do I need to know about my students' diversity in skills and knowledge?
- What do I need to know about the cultural diversity of my students?

To determine the need for a functional approach for an individual student, think about

- To what degree will the student be successful without a functional approach?
- What is the degree of real world application necessary for full participation in the learning?
- At the high school level, does the Individual Graduation Plan and Individual Transition Plan indicate a need for a functional approach for this content area?
- Are the content and instructional activities focused on and organized to include more elaborate, complex, and in-depth study of major ideas, problems, and themes that integrate knowledge within and across systems of thought?
- Do the content and instructional activities allow for the development of application of productive thinking skills to enable students to reconceptualize existing knowledge and generate new knowledge?

- Do the content and instructional activities enable students to explore constantly changing knowledge and information and develop the belief that knowledge is worth pursuing?
- Do the content and instructional activities encourage exposure to, selection of, and use of specialized and appropriate resources?
- Do the content and instructional activities promote self-initiated and self-directed learning and growth?
- Do the content and instructional activities provide for the development of self understanding and the understanding of ones relationships to persons, societal institutions, nature and culture?

For students with individual plans such as IEPs, 504 Plans, or plans for gifted and talented students, information to help answer these questions can be found in their school records and from participating on the Admissions and Release Committee, 504 committee, or in other student planning processes. These plans describe the specially designed instruction, including extensions matched to individual needs. Since you may not know all of your students when you first design a class or unit framework, you most likely will need to revisit some of these questions at different points along the way. For example, if you develop a class or unit framework model over the summer you most likely will not know every student and their needs.

Step 4: Once you have answered the preliminary questions which will assist you in crafting your guiding questions and activities, you are ready for the next step. In this step you intentionally incorporate the standards for the features of the functional approach in your course design. Use the standards to guide you in further development of a class or unit framework from a functional approach. A class or unit framework is developed from a functional approach when it incorporates the standards for each of the features of the definition.

Step 5: Once you develop your class or unit framework from a functional approach, continue to revise them as the needs, interests, and abilities of your students change. In this step, move from the total design to thinking about how this approach guides individual student decisions. For example, for a student with disabilities, the ARC needs to develop an IEP which incorporates the necessary instruction and extensions needed by the student for accessing the general education curriculum. For the student who is gifted and talented, this may mean replacing content at a more complex level when he/she already knows the content.

<u>Support Systems</u>

At the broadest level, implementing a functional approach framework involves systemic restructuring of schools to support shared responsibility for all students, including shared vision, mission, and leadership. In designing a functional approach to learning at a systems levels, schools may ask the following questions to make sure needed supports are available to implement a functional approach:

> *How are school schedules based on the time students actually need to acquire content? Have we considered*
>
> - Programs with content themes off campus;
> - Combination of service learning, mentorships and school settings during the day;
> - Flexible structures to allow for compacting or increasing the length of time to acquire content;
> - Use of block scheduling; or
> - Opportunities to take courses over two blocks instead of one, or two years instead of one.

Are roles and responsibilities of staff clearly defined to support successful implementation of a functional approach?

How do the attitudes of staff support implementation of a functional approach?

Is there adequate personnel and space for successful implementation of the functional approach?

What district and school level supports are needed to facilitate successful implementation?

Are there flexible transportation options to support instruction in natural settings (community, work , home, school)?

What professional development for staff is needed to support implementation?

Are there opportunities for programs with content themes off campus?

What we know about teaching young children naturally supports schools implementing a functional approach to learning the elementary level. The standards for the functional approach reflect many of the principles of Kentucky's Primary Program.

Kentucky's Primary Program

Ready Schools

The National Education Goals Panel has identified several characteristics of schools that are ready for children as opposed to the traditional concept that children must be ready for school. Frequently, schools attempt to measure a child's readiness to enter school or be promoted or retained within grade levels based on a set of standards and measures that are not appropriate and do not recognize the unique developmental and learning characteristics of young, primary-age children. Schools that are ready for children have given thoughtful planning to the organization of their curriculum and instructional processes. Ready schools view assessment as an authentic measure or description of students' initial level of functioning, what they know and can do, and what they need to be able to do to reach certain benchmarks or standards of achievement (e.g., successful completion of the primary program in order to enter the fourth grade based on specific exit criteria, learning benchmarks, academic expectations).

Ready schools are prepared to ease the transition between home and school and strive for continuity between home, early care and education programs, and the elementary school. In these early years, children construct knowledge through play, interactions with adults and children, and applications and connections of what they have experienced or learned in concrete ways. An appropriate primary program for all children recognizes that children grow and develop as a whole, not one dimension at a time or at the same rate in each dimension. Thus, instructional practices should address social, emotional, physical, aesthetic, and cognitive needs.

The developmental needs of children do not radically change from the time they enter primary school from early care programs and preschools. The primary school program flows naturally from preschool programs and exhibits developmentally appropriate educational practices. These practices allow children to experience success while progressing according to unique learning needs and also enables them to move toward attainment of the educational goals and capacities of the Kentucky Education Reform Act (KDE,1991). The primary program in Kentucky is built upon the idea that schools must be ready for children, and a recognition that curriculum and instruction for primary students, including entry level, must demonstrate an acute awareness of the developmental and learning characteristics typical of young children.

The development of strategies for integrating curriculum and instructional practices are predicated on the beliefs that ready schools

- help children learn and make sense of their complex and exciting world;
- are committed to the success of every child;
- are committed to the success of every teacher and adult who interacts with children during the school day;
- introduce or expand approaches that have been shown to raise achievement;
- alter practices and programs if they do not benefit children;
- serve children in communities;
- take responsibility for results; and
- have strong leadership (National Education Goals Panel, 1998).

Primary Philosophy

The Kentucky Education Reform Act was premised on the belief that all children can learn. This belief is the foundation of the structure of Kentucky's primary school program "which means that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter the fourth grade...successful completion of the primary school program shall be a prerequisite for a child's entrance into fourth grade" (KRS 158.031). The architects of Kentucky's primary school program envisioned a paradigm shift from a traditional concept of lower elementary grades K, 1, 2, and 3 to a classroom and school environment that would be developmentally appropriate as a means to help young children

- learn and construct knowledge;
- master literacy and numeracy; and
- use their experiences, knowledge and skills to engage in authentic, real-life tasks.

Organization

The primary program places strong emphasis on

- self-sufficiency,
- group membership,
- integrating knowledge, and
- an acknowledgment of child development research that drives the developmental appropriateness of the curriculum and instruction.

The organization of the primary program is ungraded and focuses on continuous progress through multiage and multiability classroom configurations. Children can be flexibly grouped and regrouped by skills, abilities, interests, learning styles, and for direct instruction based on the needs of the child. Allowing children to work with the same teacher(s) for more than one year fosters continuity of study patterns, a consistent family atmosphere, an opportunity to be both a follower and a leader, and familiarity with routines and procedures.

Family groupings of children and teachers remaining together for more than one year support children's individual needs for

- responsive instruction and learning experiences,
- interactions and relationships that build independence and responsibility, and
- group learning opportunities that foster mutual respect and understanding between children and teachers.

A multiage classroom in the primary program is organized to support the natural clusters and groupings children experience in their daily lives. Single-age classrooms do not represent the typical organization of family life where children of different ages coexist or life in a community where children play and develop social skills with children of different ages. The primary classroom that is structured around broad-based themes and inquiry serves as a framework for

- facilitating curricular planning,
- providing a consistent cadence to student work, and
- offering extended periods of time for meaningful, self-directed learning (Davenport, 1998).

The use of large group instruction, flexible small groups for direct instruction and skill development, learning centers, and independent learning in the multiage classroom allows students to make discoveries and construct knowledge by working with other children older and younger than themselves. In addition, this organizational structure provides varied and multiple opportunities for children to be successful learners working at their own developmental pace. It provides teachers greater opportunities to assess students in both product and process through enlightened, careful observations. These observations reflect information about a student's attainment of goals, development of content specific skills, and a functional knowledge of particular concepts.

In a multiage classroom, children are taught both content and skills or tools (e.g., literacy, numeracy, writing techniques) within the context of broad-based themes or units. The day becomes totally integrated and connected for the children, who have the opportunity to explore, question, and share information that is important to them as well as to others in the classroom. Their work is engaging and challenging (Lolli, 1998).

Using a variety of instructional methods and organization, teachers and children can work as partners in learning permitting children to become independent learners. Teachers in a multiage classroom make curricular and instructional decisions knowing that their students come into the learning community at different ages and with different abilities. An appropriate curriculum is learner-centered and encourages teachers to consider how student's questions can lead them naturally into different disciplines. Student's knowledge is augmented and enriched through their interactions with others when engaged in honest, relevant inquiry (Harst cited in Davenport, 1998).

The opportunities in a multiage classroom for all children to learn at their highest level are limited only by the imagination, creativity, and leadership of the participants. Challenging, rewarding inquiry that is framed by a well-developed curriculum and based upon children's interests leads to unlimited possibilities for learning activities and experiences.

Curriculum

The primary program focuses on the integration of content across the curriculum. For example, reading instruction to teach specific skills (e.g., sight words, word attack, reading for comprehension) can be integrated into a science experiment requiring children to read directions, write explanations, and review findings with other children. In an interdisciplinary model of curriculum, content areas are presented through an inquiry process using broad-based themes or units. Using this approach to curriculum, children can be given appropriate opportunities to learn from

- active, concrete experiences;
- solving real-life problems;
- collaboration with each other and the teacher;
- quality literature;

- a variety of resources and research materials;
- a balance of child-initiated and teacher-directed learning; and
- the use of inquiry and scientific investigation to discover and apply knowledge.

The curriculum in a primary classroom is designed by teachers following a developmental sequence based on the required content of the *Program of Studies*. Curriculum and instruction in an interdisciplinary model allows children to construct knowledge across a variety of instructional settings and activities. Teachers can adapt or adjust curriculum and instruction as needed based on children's strengths, interests, and needs. Content specific skills are introduced and taught as tools that children will need to accomplish their work and support their study of the concept being investigated. The integrated approach to curriculum and instruction extends children's capacity to learn and creates a mutual partnership between students and teachers.

In a multiage classroom where children are taught both content and tools in the context of broad-based themes, the curriculum becomes totally integrated and connected for the children. Through this integrated, hands-on approach to curriculum, children have the opportunity to explore, question, and share information that is important to them and to others in the classroom in an engaging and challenging environment. The multiage primary classroom breaks down the artificial boundaries and barriers to learning that may exist for many children in a traditional, teacher-directed classroom environment.

The chart on page 82 illustrates the shift from traditional graded settings to the ungraded primary program. Efforts to move along this continuum to increase student achievement and ensure equitable learning opportunities for all children, are the responsibility of school based decision-making councils.

Kentucky's Education System
Continuum to the Primary Program

FROM TRADITIONAL SCHOOL CONCEPTS (K, 1, 2, 3)	KENTUCKY LEARNING GOALS/EXPECTATIONS PRIMARY PROGRAM	PRIMARY PROGRAM CONCEPTS
PHILOSOPHY		
Uniformity is valued	Self-Sufficiency Group Membership Integrating Knowledge Cultural Diversity/Arts Child Development Research	Diversity is valued
Group norm "child must fit the school"		Individual norm - "school fits the child"
Extrinsic motivation		Intrinsic motivation
Emphasis on cognitive development		Emphasis on "whole child" - social emotional, physical, aesthetic, and cognitive
Child as dependent		Child as partner in learning
ORGANIZATION		
Graded	Group Membership Integrating Knowledge Cultural Diversity/Arts Child Development Research Continuous Progress through Multiage/Multiability Groupings	Ungraded
Age-level, ability grouped		Multiage, multiability
Grouping is static		Flexible grouping and regrouping
Child assigned individually to teacher for one year		Family grouping-groups of children remain together with same teacher(s) for more than one year
Segregated (special programs/ populations		Integrates (inclusionary, mainstreams)
CURRICULUM		
Graded	Using Basic Skills Applying Core Concepts Self-Sufficiency Group Membership Cultural Diversity/Arts Thinking/Problem Solving Integrating Knowledge Child Development Research Continuous Progress through Multiage/Multiability Groupings Professional Teamwork	Ungraded
Separate subjects		Integrated or correlated subjects
Prescribed sequence (lock-step)		Development sequence (variable)
Established (present material is covered		School/teacher determined (children's capacity to learn is extended)
Focused only on "3 Rs"		Focus on skills, processes, and attitudes toward learning
Limited multicultural content		Content multicultural/diverse
Work and play divided		Play is work for young learners
Fixed daily schedule		Flexible time
INSTRUCTION		
Sequential skill development	Using Basic Skills Applying Core Concepts Self-Sufficiency Group Membership Cultural Diversity/Arts Thinking/Problem Solving Integrating Knowledge Child Development Research Continuous Progress through Multiage/Multiability Groupings Professional Teamwork	Real-life problem solving
Rote learning		Conceptual learning
Verbal information emphasis		Constructivist, thinking emphasis
Grouping by skill ability		Group by interest, learning styles, and learning needs
Child is recipient of the teacher's training		Children as collaborators
Child is passive learner		Child as active learner
Workbooks		Concrete, hands-on learning
Whole group instruction		Integrated instructional methods
Individual tasks		Balance of large/small group instruction, and independent learning
Teacher directed		
Answers are valued		Questions are valued

Instructional Planning

The instructional model used to support student learning in the primary program is based on the following principles:

- A child learns as a total person. Knowledge and skills must be learned through all developmental areas (e.g., physical, social, emotional, intellectual) to help children learn how to learn and to establish the foundation for continuous life long learning.

- Children grow through similar stages of development but at different rates and in different styles. Every child is unique. Different levels of development and understanding affect every learning task. Children must be allowed to move at their own pace in acquiring skills. Most will learn these in their own time by the age of seven or eight years of age.

- The way a child feels about him/herself and the sense of competence he/she has in relation to learning impacts every learning act. The way a child receives information may be as important to learning as the information received. Methods, climate, atmosphere, and teacher attitude all affect children's self-esteem.

- Children learn best through interactions with the environment and people. Teacher planning time is best spent preparing the environment for active learning. As children interact with each other, the teacher, and a variety of materials, they apply all types of learning processes.

- Children learn best when they are taught through an integrated curriculum that allows for pattern building and selection of a wide variety of sensory data. Projects, learning centers, and real-life activities related to the interests of children promote learning of concepts and skills through application and meaningful practice.

- Children cannot be given knowledge. They must construct it for themselves through continuous interaction with the environment. Knowledge is constructed as a pattern of mental representations. It can only be constructed through action on materials. Each child's construction of knowledge is personal and unique. No two children, therefore, come to know something in exactly the same ways. Playful activity is the natural method of learning for young children.

- Learning is a very social process. As children converse with others about interesting projects and ideas, they expand their language and their thinking. Through conversation about the happenings in their lives, children are encouraged to develop their thought and language processes. It is not through modeling that such development is possible but through application.

- Children learn the skills of communication and expression when they are given many opportunities to share their learning with others through a variety of forms. In a good language and literacy program, children are encouraged to expand their abilities to communicate orally, as well as through reading and writing.

- Children learn math skills and processes when they are encouraged to explore, discover, and solve real mathematics problems through both spontaneous and planned activity. The math program in the elementary school should be designed to interest children in thinking and organizing experiences in mathematical ways rather than to teach rote computation.

- Children learn best when the classroom environment is organized but flexible, and when developmentally appropriate tasks are encouraged. Disorganization, inappropriate expectations, and emphasis on paper-pencil activities too soon lead to stress and stress-related illnesses in young children (Southern Association of Children Under Six, 1990).

Interdisciplinary models of curriculum provide a framework for teaching and learning that is particularly compatible to the ungraded primary program. The examples presented in the *Implementation Manual* for the primary and intermediate levels illustrate how an integrated approach to curriculum and instruction

- addresses what is to be taught at and across each level of the learning continuum content area for elementary students;
- provides a holistic approach that allows students to relate information to prior knowledge and real situations;
- uses varied instructional strategies, multiple materials and modalities, and appropriate developmental and/or academic tasks; and
- addresses meaningful and real-life issues, problems, or questions and uses multimedia and computer technology in authentic tasks and assignments.

The development of the interdisciplinary model of curriculum is an evolving process of instructional design with limitless connections across the curriculum. The use of an interdisciplinary model of curriculum and instruction

- allows schools to decide on an intentional curriculum that is comprehensive and addresses all content;
- serves as a springboard for grade level units that focus on the content to be taught at that level using discipline-based and/or integrated instructional approaches;
- is based on a wide range of resources, content guidelines, sample assessment items, academic expectations, the *Program of Studies* and many other teacher resources;
- addresses learning specific to all disciplines;
- provides opportunities for students to experience contextual questions and authentic local, state, and world situations in their education; and
- ensures that all curricular issues and content are covered throughout the year with the flexibility to adjust or adapt the models focus to meet the specific needs of individual and groups of children.

The use of an interdisciplinary model of curriculum and instruction directs teachers to decide the sequence in which specific content will be taught, aligns assessment with instruction, and provides ongoing assessment opportunities throughout the instructional process. Finally, interdisciplinary models are student centered, addressing the academic, social, cultural, or global concern of students.

Using the framework and process for the development of interdisciplinary models described in this manual, teachers can a) integrate and connect learning opportunities for students among and across content areas, b) provide instruction with a clear focus on content and process, c) use best instructional practices that engage students in learning, and d) use strategies and interventions to address the needs of diverse learners. This process can help to establish a beginning point that addresses students' needs of each school including culminating performance events and standards. A well-planned interdisciplinary model of curriculum engages students in

- problem solving,
- reading a variety of genres,
- writing across content and curricular areas,
- arts and humanities,
- mathematical experiences,
- science exploration,
- hands on research to explore their world, and
- the use of technology to accomplish authentic tasks.

In the following section, the instructional settings of the interdisciplinary model of curriculum, including the roles of teachers and students are discussed.

Instructional Settings

Teaching and learning in the interdisciplinary model generally centers around the following curriculum and instruction framework. Throughout the day, children will participate in whole group instruction; small, flexible groups for direct instruction and skill development; learning centers; and independent work.

Whole Group Instruction

Whole group instruction and activities provide a short teaching session aimed at expanding children's general understanding of a subject area. The session is planned and prepared by the teacher to present specific content information and opportunities for children to gain knowledge and skills that can be used as tools for their investigation of the broad-based theme, unit, or concept that is being studied. It is also an opportunity for the teacher to discuss and model strategies with the children. These strategies might include:

- planning, gathering, and presenting information;
- providing instructions for specific activities, class meetings, reading aloud, group lessons; and when appropriate
- involving community partners in classroom activities.

A key purpose of whole group instruction is to conduct daily introductory sessions that are planned to teach skills and further develop children's understanding of the content area that is being investigated by the class. The introductory sessions should be based on the teacher's knowledge and observations of what specific content area skills need to be covered in order to meet the needs of individual children and address the achievement goals for culminating performance measures of the thematic or broad based unit of study. The teacher actively involves children in the whole group instruction session to

demonstrate a variety of task completion strategies. Successful whole group instruction builds a positive working environment and creates a feeling of community within the classroom.

Flexible Groups

A key tool for the teacher to ensure that all students are acquiring the content knowledge and skills that are required to support individual and group learning goals is small, flexible groups that are convened for direct instruction. The use of flexible grouping based on children's academic needs, learning styles, and interests allows the teacher to work in various arrangements with a small, homogenous group of children. Flexible grouping of students is not ability grouping for the purpose of tracking or leveling students. The composition of these small student groups should be flexible and will vary throughout the year in order to meet learning needs of individual students.

It is appropriate for small, flexible groups to meet for varying periods of time throughout the day as determined by student needs. For example, flexible groups may work together based on

- skill development,
- common interests,
- social development,
- work habits, and
- the development of task completion skills as a tool to support independent learning activities in the classroom.

In addition, a teacher may use random grouping to assess the students' acquisition of content knowledge and/or the levels of achievement on a specific learning goal or assignment. Movement within and between flexible group sessions can be facilitated by giving students responsibility for the collection and storage of materials and equipment required for the mini-lesson. In addition, children participating in the small group should have access to all learning resources available, develop cooperative group skills, and develop a routine of teacher-student conferences which are an integral part of this teaching and learning arrangement.

Learning Centers

Learning centers involve individual or small groups of students working cooperatively or alone on projects that they have chosen or selected with the teacher's guidance. Materials and activities in the learning centers are concrete, provide learning based on real life experiences, and are relevant to the content areas being presented through the current unit of study. The teacher provides clear instructions on the purpose and use of materials and activities in the learning centers. The teacher facilitates appropriate student behavior by providing multiple and varied learning activities, a clear understanding of learning expectations, and opportunities for student self-reflection and authentic assessment to measure academic performance.

Research has consistently shown that students who collaborate with each other in a learning experience a) improve in content knowledge, b) experience increased productivity, and c) develop self-esteem and interpersonal skills. Students who are given the opportunity to achieve a goal through collaboration with other students and shared knowledge experience enhanced levels of learning and gain academic confidence.

The ***teacher's role*** in center-based learning activities is to

- organize and plan;
- facilitate rather than lecture;
- observe, evaluate, and record student performance; and
- use observations/evaluations to drive future instruction.

The ***students***

- observe,
- predict,
- hypothesize,
- perform,
- create,
- pose questions, and
- research answers (KDE, 1994).

Independent Work

The culmination of the teaching and learning process in the primary classroom is the ability of individual students to work independently on projects, activities, and skill development. The daily classroom schedule should allow for children to spend extended periods of time investigating and applying newly acquired skills and concepts in order to develop higher order skills such as critical thinking, problem solving, communication using oral and written processes. Teachers can encourage independent learning and empower students by encouraging self-reflection and guiding student inquiry with questions such as

- What do you need to do about that?
- Where do you think you could find that information?
- How would you do it differently?
- What suggestions would you give to someone else who wanted to try this?
- How are you going to solve this problem?
- Tell me how I can help you.

Finally, self-reflection can empower students to become self-directed learners. Self-reflection offers students the opportunity to select and define their individual goals. Working collaboratively with the teacher, students can develop a plan of action for independent learning, establish individual goals and standards of performance, and strategies to measure his/her individual progress and academic achievement.

Assessment

The beginning and ending point of the teaching and learning process is assessment. There is an intrinsic relationship between assessment and the teaching and learning process that exceeds the purpose of testing the accumulation of discrete, disconnected skills which, in fact, may interfere with the higher order skills necessary to function in today's world. Our current conception of teaching and learning is based on a cognitive view of how learning occurs and calls for an active, constructivist approach to

learning in which the whole is greater that than the sum of its part. This holistic view of learning is reflected in contemporary instructional methods such as integraged language arts; hands-on, minds-on approaches in science; writing to learn across the curriculum; problem solving and emphasis on reasoning in mathematics; and cooperative learning (Marzano, Pickering, and McTighe, 1993). Thus, if learning becomes holistic, assessments should provide holistic evidence of student performance, not bits and pieces of information unrelated to real life. "Carefully crafted assessments would ask students to supply answers, perform observable acts, demonstrate skills, and supply portfolios of work" (National Commission on Testing and Public Policy, 1991). The assessment activities described in the *Implementation Manual* are consistent with current theory on assessment and reflect the teaching and learning strategies described in the interdisciplinary model.

Authentic assessment describes the assessment of student processes and products that reflect the application of knowledge and skills used in real-life experiences. These descriptions refer to knowledge and skills necessary to complete performance tasks that require students to meet identified standards.

Assessment is developed within each interdisciplinary model to address content and lifelong learning standards that are consistent with Kentucky's Learning Goals and Academic Expectations. Content standards address academic knowledge and skills associated with specific disciplines. Lifelong learning standards address knowledge and skills that cut across all disciplines and are applicable to life outside the classroom (Marzano et al., 1993). Planning performance tasks and authentic assessment must go hand in hand with planning and delivering instruction that takes into account the constructivist nature of learning

Extensions

In recent years, considerable research and discussion have been focused on how children learn. There is an increased understanding of the relationship between academic success and the teaching styles of individual teachers, methods of instruction, and intervention strategies. The interdisciplinary model of teaching and learning provides a natural link among instructional strategies such as whole group, flexible groups, center based activities, and independent work. In this model, teachers can customize their teaching methods and strategies to meet the individual styles, interests, and needs of all students.

Finally, consideration must be given to exceptional students in the classroom. Modifications in instructional strategies that meet the needs of all children must bemade. These modifications are not meant to provide a different or less rigorous curriculum but to extend the curriculum in a way that is most appropriate for children's learning needs and developmental levels. Teacher's awareness of children's learning styles and development, application of systematic interventions to meet the needs of individual children, and the importance of creating a classroom environment that supports children's diverse learning is key to improved student achievement. A list of common extensions that support teacher's efforts to plan and deliver appropriate curriculum and instruction can be found on pages 60-65 of this manual.

Reading Strategies

Kentucky's Academic Expectation 1.2 states that students should learn to make sense of a variety of materials they read. The *Program of Studies* states that students at the primary level will, "develop abilities to apply appropriate reading strategies to make sense of a variety of print and non print texts (literary, informational, practical/workplace, and persuasive) for various authentic tasks." Early literacy experiences help children define reading and develop attitudes about reading.

Reading is a complex process dependent upon the

- ability to use phonics skills, that is, knowledge of letters and sounds to decode printed words quickly and effortlessly, both silently and aloud:
- ability to use previously learned strategies ; and
- ability to think critically about the meaning, message, and aesthetic value of the text (KRS 158).

The primary model that follows includes many activities that incorporate reading and learning of reading; however, it does not include specific strategies or methods used to teach beginning readers. There are many different strategies that can be used to teach children to read and all could not be included in this document.

Instructional approaches to reading should be based on reliable, replicable research and include a balance of strategies that support attainment of reading and phonics skills as contained in the *Program of Studies*. A variety of resources related to reading are included in the resources section of this document. Additional information concerning successful research-based early reading models are available from the Collaborative Center for Literacy Development at the University of Kentucky. To contact the center, call 606-257-6118 or access their Web site <http://www.uky.edu/education/literacy-ccld/>.

Primary Program References

Davenport, R.M. "A Legacy of Learning: A Multiage Classroom." *Primary Voices, K-6* 6 (2) (1998): 19-35.

Harste, J.C. "Inquiry-Based Instruction." *Primary Voices, K-6* 1 (1993): 2-5.

Kentucky Department of Education. *A Planbook for Meeting Individual Needs in Primary School.* Frankfort, KY: Author, 1994.

Kentucky Department of Education. *The Wonder Years.* Frankfort, KY: Author, 1991.

Lolli, M. "Multiage Magic." *Primary Voices,* K-6 6 (2) (1998): 10-18.

Marzano, R., Pickering, D., and McTighe, J. *Assessing Student Outcomes.* Alexandria, VA: Association for Supervision and Curriculum Development, 1993.

National Commission on Testing and Public Policy. *From Gatekeeper to Gateway: Transforming Testing in America.* Chestnut Hill, MA: Author, 1991.

National Education Goals Panel. *Ready Schools*. Washington DC: Author, 1998.

Southern Association of Children Under Six. *Developing an Appropriate Learning Environment for Children Five through Eight Years Old.* Little Rock, AR: Author, 1990.

Model Submission Information

Hopefully, this manual will provide useful ideas and direction for implementation of the content outlined in the *Program of Studies*. However, it has not been possible to include every model configuration . Teachers are encouraged to develop additional models to share with others across the state. The Division of Curriculum Development will provide guidelines for the development of additional models and disseminate the models via the KDE Web Site <http://www.kde.state.ky.us>. Contact the Special Projects Branch at (502) 564-2106 or (rsims@kde.state.ky.us) for further guidelines and submission information.